



PSME-WRSA JC

PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
WESTERN REGION SAUDI ARABIA JEDDAH CHAPTER



CHARTERED 1995

MOST OUTSTANDING CHAPTER

2005, 2006, 2007, 2011, 2012 AND 2013

18TH ANNUAL CONFERENCE

VIRTUAL GENERAL MEMBERSHIP MEETING

03.12.2021

**Mechanical Engineers:
Sustaining Digital
Transformation Towards
Industrial Excellence.**



2022



10TH ANNUAL CON

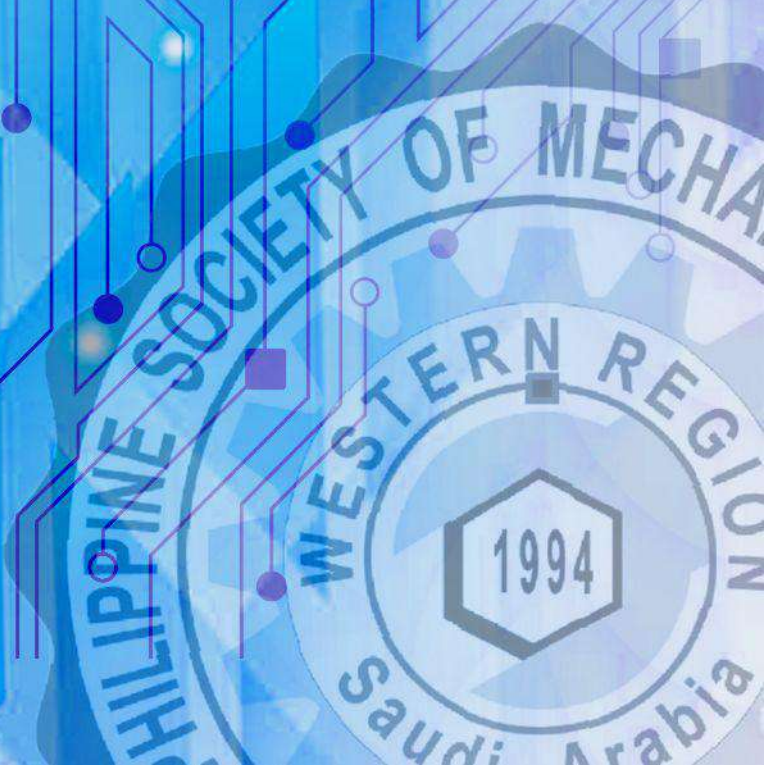




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PROGRAM OF ACTIVITIES



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

DATE: DECEMBER 3, 2021

MORNING SESSION

TIME	DURATION		
8:30 - 9:00	0:30:00	Registration and Acknowledgment of Participants	JOHN RAY O. MADLA, RMEE, ASEAN Eng. NIÑO JOSE A. LOPEZ, RMEE
9:01 - 9:04	0:03:00	PSME Prayer & Muslim Prayer	Zoom Master
9:05 - 9:08	0:03:00	Philippine National Anthem	Zoom Master
9:09 - 9:12	0:03:00	Saudi National Anthem	Zoom Master
9:13 - 9:16	0:03:00	Presentation of House Rules	Zoom Master
9:17 - 9:19	0:02:00	OPENING OF 18TH VIRTUAL ANNUAL CONFERENCE	JOSE MELVIN D. SANTOS, RMEE, ASEAN Eng.
9:20 - 9:23	0:03:00	WELCOME ADDRESS	LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.
9:24 - 9:54	0:30:00	KEYNOTE SPEAKER Introduction of Speaker Speaker	LEONARD P. MERIALES, RMEE, ASEAN Eng. HON. EDGAR TOMAS Q. AUXILIAN CONSUL GENERAL, PCG JEDDAH MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.
9:55 - 10:25	0:30:00	Awarding of Plaque of Appreciation INSPIRATIONAL MESSAGE Introduction of Speaker Speaker	JOHN RAY O. MADLA, RMEE, ASEAN Eng. HON. ROEL B. MARTIN LABOR ATTACHE, POLO JEDDAH MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.
10:26 - 11:46	1:20:00	Awarding of Plaque of Appreciation TECHNICAL PRESENTATION 1 Introduction of Speaker Technical Speaker "High Current Generator Switchgear" Question & Answer Awarding of Plaque of Appreciation	WILLYN D. ESPINO, RMEE, ASEAN Eng. ENGR. TEODORO M. AGBING Country Business Unit Head, Siemens - Philippines MODERATOR MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.
11:53 - 11:55	0:02:00	Photo Op	Zoom Master
11:56 - 12:06	0:10:00	Raffle Draws	ORLAN C. MORIONES, RMEE, ASEAN Eng.
12:07 - 12:52	0:45:00	KUMUSTAHAN (Prayer Time & Lunch Break)	LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.
12:53 - 14:23	1:30:00	TECHNICAL PRESENTATION 2 Introduction of Speaker Technical Speaker "Elevator Design & Standards 201 (Safety Systems)" Question & Answer Awarding of Plaque of Appreciation	NAPOLEON M. CASTAÑEDA, RMEE, RMP LORENZO O. GAVIOLA, RMEE Deputy Vice President - External Affairs MODERATOR DONALD B. MAKALINTAL, RMEE
14:24 - 14:25	0:01:00	GENERAL MEMBERSHIP MEETING Call to Order	LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.
14:26 - 14:28	0:02:00	PSME Creed	Zoom Master
14:29 - 14:32	0:03:00	PSME Core Values	Zoom Master
14:33 - 14:35	0:02:00	Reading and Approval of the Order of Business	MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.
14:36 - 14:51	0:15:00	KEYNOTE SPEAKER Introduction of Speaker Message of the Keynote Speaker	NIÑO JOSE A. LOPEZ, RMEE JERRY D. ASUNCION, FPSME, PME President, PSME National DONALD B. MAKALINTAL, RMEE
14:52 - 15:07	0:15:00	Awarding of Plaque of Appreciation INSPIRATIONAL MESSAGE Introduction of Speaker Speaker	ROSELLER A. JUNSAY, JR., RMEE MELANIE P. BANAYOS, FPSME, PME 2022 President-Elect, PSME National DONALD B. MAKALINTAL, RMEE
15:08 - 15:13	0:05:00	Awarding of Plaque of Appreciation Reading and Approval of the Previous MOM	MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.
15:14 - 15:19	0:05:00	President's Report	LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.
15:20 - 15:25	0:05:00	Treasurer's Report	JOBERT M. DE LA ROSA, RMEE
15:26 - 15:31	0:05:00	Membership Director's Report	JOHN RAY O. MADLA, RMEE, ASEAN Eng.
15:32 - 15:37	0:05:00	Technical Affairs Director's Report	NAPOLEON M. CASTANEDA, RMEE, RMP
15:38 - 15:43	0:05:00	Information Technology Director's Report	BLIVEN U. GARCIA, RMEE
15:44 - 15:49	0:05:00	Plant Tours Director's Report	ORLAN C. MORIONES, RMEE, ASEAN Eng.
15:50 - 16:05	0:15:00	Presentation of CBL Amendment & Ratification	NORIEL J. NOLLORA, RMEE
16:06 - 16:16	0:10:00	Presentation and Induction of New Members	JOHN RAY O. MADLA, RMEE, ASEAN Eng.
16:17 - 16:27	0:10:00	PRESENTATION OF 2021 BOARD OF DIRECTORS AND DISCHARGING FROM OFFICE	NAPOLEON M. CEPRIASO, FPSME, PME, ASEAN Eng. Co-Chairman, 2021 COMELEC
16:28 - 16:38	0:10:00	PRESENTATION OF 2022 BOARD OF DIRECTORS INDUCTION OF 2022 BOARD OF DIRECTORS	WILFREDO R. RUIZ, FPSME, PME Chairman, 2021 COMELEC JERRY D. ASUNCION, FPSME, PME President, PSME National
16:39 - 16:41	0:10:00	Turnover Ceremony	
16:42 - 16:57	0:05:00	Message of 2022 Chapter President	NIÑO JOSE A. LOPEZ, RMEE
16:48 - 16:58	0:10:00	Open Forum and Announcements Adjournment	JOSE MELVIN D. SANTOS, RMEE, ASEAN Eng.
16:59 - 17:09	0:10:00	Presentation of Awards	LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.
17:10 - 17:15	0:05:00	Raffle Draws	ORLAN C. MORIONES, RMEE, ASEAN Eng.
17:16 - 17:19	0:03:00	Closing Remarks	JOSE MELVIN D. SANTOS, RMEE, ASEAN Eng.
17:20 - 17:22	0:02:00	Photo Op	Zoom Master

AFTERNOON SESSION

MODERATOR: ALDRIN ALIZON D. LANGO, RMEE, ASEAN Eng. / ZOOM MASTER: BLIVEN U. GARCIA, RMEE



"18TH ANNUAL CONFERENCE"



2021 BOARD OF DIRECTORS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

EXECUTIVE OFFICERS

CHAPTER PRESIDENT



LEE I. BONIFACIO
RMEE, M.A., ASEAN ENG.

EXECUTIVE VICE PRESIDENT



ROSELLER A. JUNSAY, JR.
RMEE

VP INTERNAL AFFAIRS



NIÑO JOSE A. LOPEZ
RMEE

VP EXTERNAL AFFAIRS



JOSE MELVIN D. SANTOS
RMEE, ASEAN ENG.

SECRETARY



MARIA MAY M. ATOLE
RMEE, RMP, ASEAN ENG.

TREASURER



ROBERT M. DE LA ROSA
RMEE

AUDITOR



LEONARD P. MERIALES
RMEE, ASEAN ENG.

PRESS RELATIONS OFFICER



OLIVER O. SALAZAR
RMEE, ASEAN ENG.

DIRECTORS

MEMBERSHIP



JOHN RAY O. MADLA
RMEE, ASEAN ENG.

TECHNICAL AFFAIRS



NAPOLÉON M. CASTAÑEDA
RMEE, RMP

PROFESSIONAL ENHANCEMENT



JULIUS M. CAÑEGA
RMEE

INFORMATION TECHNOLOGY



BLIVEN U. GARCIA
RMEE

CODE OF ETHICS



NORIEL J. NOLLORA
RMEE

PLANT TOURS



ORLAN C. MORIONES
RMEE, ASEAN ENG.

SPORTS



JOSEPH V. PANGANGAAN
RMEE

IMMEDIATE PAST PRESIDENT

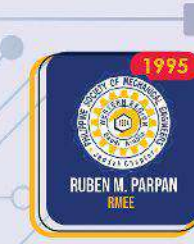
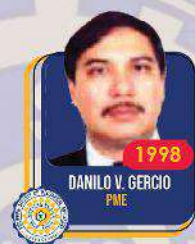
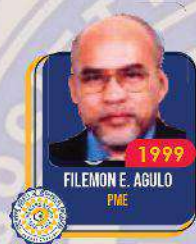
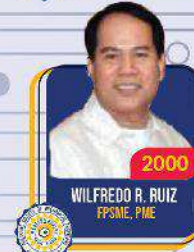
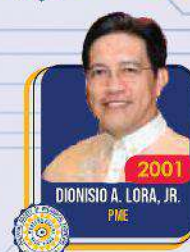
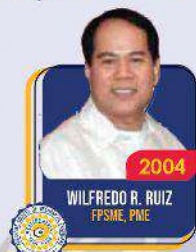
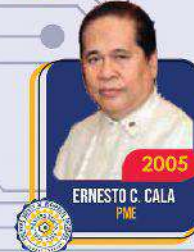
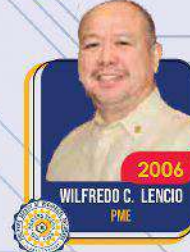
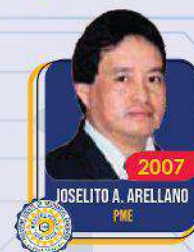
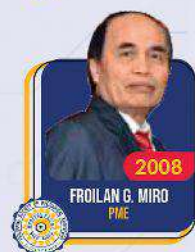
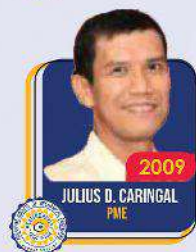
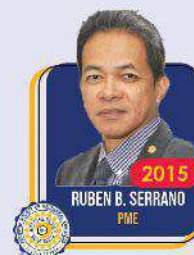


ALDRIN ALIZON D. LANGO
RMEE, ASEAN ENG.



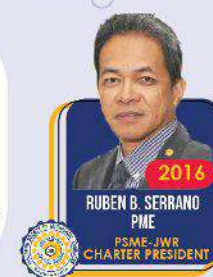
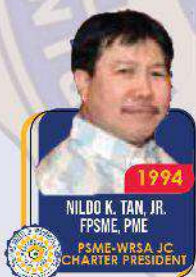
“Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence.”





MISSION STATEMENT

Maintain integrity of the Mechanical Engineering profession.
Promote excellence in the practice of profession.
Develop among members high ideals of competence, ethical conduct, integrity and civic consciousness.
Contribute to the enhancement of Science and Technology.
Foster cordial, harmonious, and promote fellowship and cooperation among Mechanical Engineers globally.





PSME NATIONAL AWARDEES HALL OF FAME



YEAR 2017 & 2012
Wilfredo R. Ruiz, PME
Fellow Award

YEAR 2016
Napoleon M. Cepiaso, PME
Fellow Award

YEAR 2011
Nildo K. Tan, Jr., PME
Fellow Award

YEAR 2018
Elmer B. Quanco, RMEE
Housing Refrigerating Appliances

YEAR 2018
Aldrin Alizon D. Largo, RMEE
Advance Cooling System Engineering

YEAR 2017
Ruben B. Serrano, PME
Tool Engineering

YEAR 2016
Jaime L. Leviste, RMEE
Biomedical Engineering

YEAR 2012
Ace Glen B. Garcia, RMEE
Consultancy

YEAR 2012
Roel Alton G. Banawis, RMEE
Design

YEAR 2012
Cristostomo C. Ortiz, PME
Community Service

YEAR 2012
Joselito L. Bentulan, PME
Manufacturing

YEAR 2011
Napoleon M. Cepiaso, PME
Construction

YEAR 2011
Rainier P. Patawi, RMEE
Information Technology

YEAR 2009
Dionisio A. Lora, Jr., PME
Hotel Engineering

YEAR 2005
Ernesto C. Cala, PME
Automatic Energy Management Control System

YEAR 2003
Julius D. Caringal, PME
Automation and Controls

YEAR 2003
Wilfredo R. Ruiz, PME
Automation and Controls

YEAR 2002
Napoleon M. Cepiaso, PME
Environmental Engineering

YEAR 2000
Filemon E. Agulo, PME
Consultancy

THE OUTSTANDING MECHANICAL ENGINEER

MEMBERS' AWARDS

YEAR 2012
Napoleon M. Cepiaso, PME
Most Outstanding
Chapter President Int'l

YEAR 2010
Jeffrey C. Esperanza, RMEE
Most Outstanding
Committee Chairman

YEAR 2002
Ricardo V. Romero, PME
Most Outstanding
Committee Chairman

YEAR 2012
Lee I. Bonifacio, RMEE
Most Outstanding
Chapter Secretary

YEAR 2007
Joselito A. Arellano, PME
Most Outstanding
Chapter President

YEAR 2000
Wilfredo R. Ruiz, PME
Most Outstanding
Chapter President

YEAR 2012
Jemuel B. Esguerra, PME
Most Outstanding
Committee Chairman

YEAR 2007
Rainier P. Patawi, RMEE
Most Outstanding
Member

YEAR 2000
Pedro D. Entico, PME
Most Outstanding
Committee Chairman

YEAR 2011
Rainier P. Patawi, RMEE
Most Outstanding Chapter
President Int'l

YEAR 2004
Jose Ma. Emmanuel B. Acebuqque, PME
Most Outstanding Member

YEAR 2000
Edwin M. Evasco, PME
Most Outstanding
Member

**"Mechanical Engineers: Sustaining Digital Transformation
Towards Industrial Excellence."**

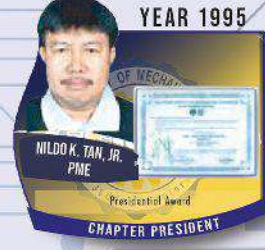
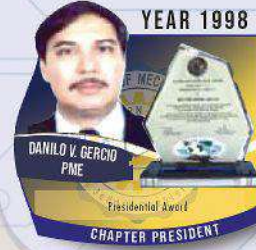
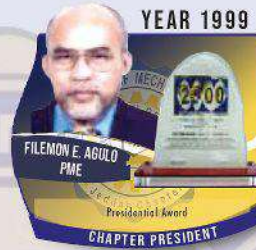
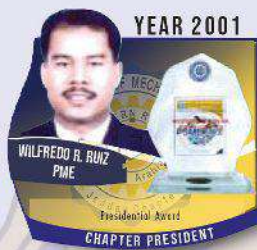
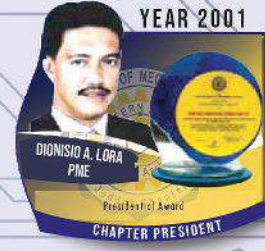
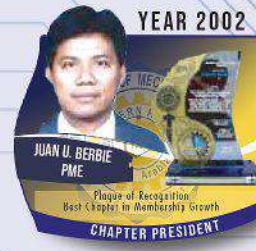
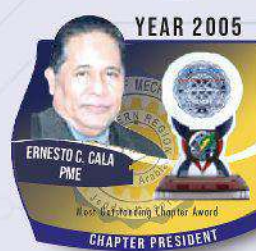
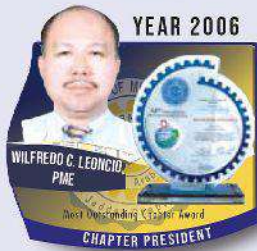
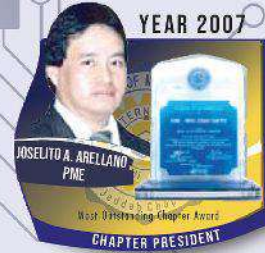
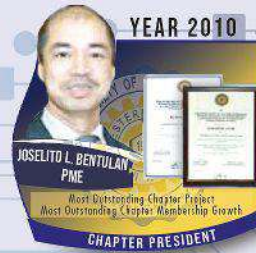
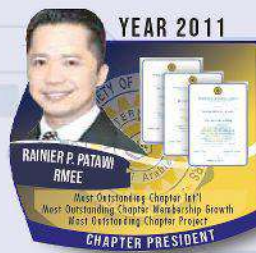
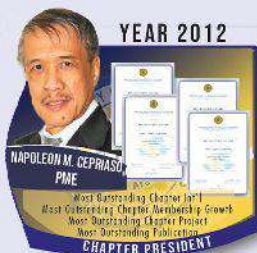
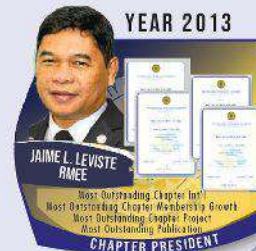
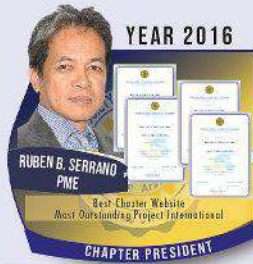
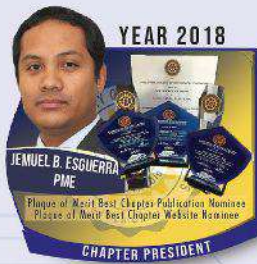




CHAPTER'S AWARDS & MEMBERS' ACHIEVEMENTS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



**Congratulations to the
Newly Conferred ASEAN Engineers!!!**



Orlan C. Moriones Maria May M. Atole Leonard P. Meriales Jose Melvin D. Santos Oliver O. Salazar Amos Joel A. Acosta Lee I. Bonifacio Liza L. Acosta Napoleon M. Cepriaso Crisostomo C. Ortiz Antonio Elmer L. Quintilla Aldrin Alizon D. Lango John Ray O. Madla



"18TH ANNUAL CONFERENCE"



2021 CHAPTER AWARDEES



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

PSME-WRSA JEDDAH CHAPTER AWARDEES

PRESIDENTIAL SERVICE AWARDS

LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.

2021 Chapter President
18th Annual Conference Chairman
2021 PPO-WRSA Board of Director

NIÑO JOSE A. LOPEZ, RMEE

Vice-President for Internal Affairs
Mid-Year Conference Chairman
CBL Amendment Committee Co-Chairman

JOSE MELVIN D. SANTOS, RMEE, ASEAN Eng.

Vice-President for External Affairs
18th Annual Conference Co-Chairman
E-Newsletter Editor-in-Chief
2021 PPO-WRSA Board of Director

MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.

2021 Chapter Secretary

JOBERT M. DELA ROSA, RMEE

2021 Chapter Treasurer

BLIVEN U. GARCIA, RMEE

Information Technology Director

ALDRIN ALIZON D. LANGO, RMEE, ASEAN Eng.

Immediate Past President
2021 PPO-WRSA Secretary

DISTINGUISHED SERVICE AWARDS

ROSELLER A. JUNSAY, JR., RMEE

LEONARD P. MERIALES, RMEE, ASEAN Eng.

OLIVER O. SALAZAR, RMEE, ASEAN Eng.

JOHN RAY O. MADLA, RMEE, ASEAN Eng.

NAPOLEON M. CASTAÑEDA, RMEE, RMP

JULIUS M. CAÑECA, RMEE

NORIEL J. NOLLORA, RMEE

ORLAN C. MORIONES, RMEE, ASEAN Eng.

JOSEPH V. PANGANGAAN, RMEE

LORENZO O. GAVIOLA, RMEE

MERITORIOUS AWARDS

NAPOLEON M. CEPRIASO, FPSME, PME, ASEAN Eng.

CRISOSTOMO C. ORTIZ, PME, ASEAN Eng.

WILFREDO R. RUIZ, FPSME, PME

CERTIFICATE OF RECOGNITION

OUTSTANDING MEMBERS

EVWIN D. JARADAL, RMEE

ANTONIO M. BERNARDO, JR., RMEE

GREG A. GULMATICO, RMEE

DONALD B. MAKALINTAL, RMEE

JULIUS CEISAR P. CASTAÑO, RMEE

ANTONIO ELMER L. QUINTILLA, ASEAN Eng.

CONFERRED ASEAN ENGINEERS

LEE I. BONIFACIO, RMEE, M.A., ASEAN Eng.

AMOS JOEL A. ACOSTA, RMEE, ASEAN Eng.

LIZA L. ACOSTA, RMEE, ASEAN Eng.

NAPOLEON M. CEPRIASO, PME, FPSME, ASEAN Eng.

CRISOSTOMO C. ORTIZ, PME, ASEAN Eng.

ALDRIN ALIZON D. LANGO, RMEE, ASEAN Eng.

ANTONIO ELMER L. QUINTILLA, ASEAN Eng.

JOSE MELVIN D. SANTOS, RMEE, ASEAN Eng.

MARIA MAY M. ATOLE, RMEE, RMP, ASEAN Eng.

LEONARD P. MERIALES, RMEE, ASEAN Eng.

OLIVER O. SALAZAR, RMEE, ASEAN Eng.

JOHN RAY O. MADLA, RMEE, ASEAN Eng.

ORLAN C. MORIONES, RMEE, ASEAN Eng.



LIFE MEMBERS



ALDRIN ALIZON D. LANGO
ME L-0000111



AMOS JOEL A. ACOSTA
ME L-0000591



LIZA L. ACOSTA
ME L-0000592



BADRODEN A. BALINDONG
ME L-0000593



ROEL ALFON G. BANAWIS
ME L-0000594



JOSELITO L. BENTULAN
ME L-0000595



NAPOLEON M. CEPIASO
ME L-0000596



JOBERT M. DE LA ROSA
ME L-0000597



ORLANDO O. DIGMA
ME L-0000598



JEMUEL B. ESGUERRA
ME L-0000599



BLIVEN U. GARCIA
ME L-0000600



JULIUS Q. GARCIA
ME L-0000601



GREG A. GULMATICO
ME L-0000603



ROSELLER A. JUNSAY JR.
ME L-0000604



DEXTER R. LACSON
ME L-0000605



FERNANDO C. LIAO
ME L-0000607



RODRIGO C. LOFAMIA
ME L-0000608



MARIO ERNESTO A. LUNA
ME L-0000609



JASON V. MACASAET
ME L-0000610



REY ANTHONY MEJIA
ME L-0000611



MILLER F. NARVAS
ME L-0000612



CRISOSTOMO C. ORTIZ
ME L-0000613



RAINIER P. PATAWI
ME L-0000614



WILFREDO R. RUIZ
ME L-0000616



JOEL A. SANTOS
ME L-0000617



RUBEN B. SERRANO
ME L-0000618



PAULO T. TARUC
ME L-0000619



MAURICIO T. VIADO
ME L-0000620



AHMED L. SELIM
ME L-0000621



JULIUS CEISAR P. CASTAÑO
ME L-0000906



ANTONIO M. DESABILLE JR.
ME L-0000907



JEFFREY C. ESPERANZA
ME L-0000908



NOEL L. FERNANDEZ
ME L-0000909



DANIEL C. MENDOZA
ME L-0000910



LEONILO T. LUCENA
ME L-0000964



DIOSCORO T. TIMTIMAN
ME L-0002158



EVWIN D. JARADAL
ME L-0002992



LORENZO O. GAVIOLA

REGULAR MEMBERS



MARIA MAY M. ATOLE
ME R-0000290



JULIUS M. CAÑECA
ME R-0000291



NAPOLEON M. CASTAÑEDA
ME R-0000292



EDWIN P. GONZALES



ELISER R. EFA
ME R-0000293



WILLYN D. ESPINO
ME R-0000294



DONALD B. MAKALINTAL
ME R-0000295



JOSEPH V. PANGANGAAN



ORLAN C. MORIONES
ME R-0000296



NORIEL J. NOLLORA
ME R-0000297



OLIVER O. SALAZAR
ME R-0000298



CONRADO M. GO JR.



GERRY E. ABELLANA
ME R-0000340



LEE I. BONIFACIO
ME R-0000341



EDNYL G. CELO
ME R-0000342



ARRNIEL RAE M. RAMAS



RAFFY A. GANGE
ME R-0000343



RONALD G. GULTIANO
ME R-0000344



NIÑO JOSE A. LOPEZ
ME R-0000345



THOMAS II M. ZULUETA



JOHN RAY O. MADLA
ME R-0000346



LEONARD P. MERIALES
ME R-0000347



MARY ANN C. PALACIO
ME R-0000348



MOHAMAR P. YUSOPH



JOSE MELVIN D. SANTOS
ME R-0003232



ANTONIO M. BERNARDO JR.
ME R-0003233



MELCHOR B. CAMPO
ME R-0003234



ARMANDO C. URBANA



JOHN ISAAC P. GONZALES



SHERWIN D. FRANCISCO



CLARISA C. MANALO



CRISTINO E. RAMBUYON

ASSOCIATE MEMBERS



MARK ANGELO T. PUYAWAN



CHRIS ALPHY D. ORTUA
A-0000023



CORNELIO L. BAGUAN
A-0000214



JULIAN JR. A. GRANADA
A-0000215



EDGAR B. MADRIAGA
A-0000216



GERARD R. MAQUILING
A-0000217



ANTONIO ELMER L. QUINTILLA
A-0000218



CONFERENCE LOGO AND THEME RATIONALE



CONFERENCE LOGO

By: Jose Melvin D. Santos
RMEE, ASEAN Eng.



Our conference logo represents the Chapter's Theme for the year 2022, **"Mechanical Engineers: Sustaining Digital Transformation towards Industrial Excellence"**. The Mechanical Engineers are represented by the gear and the robot wearing a safety hat and equipped with adjustable wrench and caliper while holding on to the Chapter's Seal. The circling yellow arrows outlined in green symbolize SUSTAINABILITY. We are in the age of DIGITAL technology and this is represented by the symbols and line segments going different directions as seen on the gear background. As the world embraces the Industrial Revolution 4.0, today's INDUSTRIES are represented by the images inscribed on the numbers of year 2022. And the symbols of EXCELLENCE are the 3 golden stars at the upper and along the pitch circle of the gear.



"Mechanical Engineer: Sustaining Digital Transformation towards Industrial Excellence"

By: Niño Jose A. Lopez
RMEE

Everything is digital nowadays, starting from our smartphones, social media, cryptocurrencies, and to file sharing in the offices. Digital represents accuracy and efficiency as all information and functions can be accomplished at impressive speed.

The Industrial Age which began in Great Britain in 1760 that transforms hand tools to power-driven machines is slowly being override by the Information/Digital Age that began in the mid-20th century. Now, we are in the midst of this Digital Age, information is being shared in lightning speed. Slowly the TV Box is being replaced by Internet TV since broadcasting can be done in real time.

Now, the mechanical engineer is being overwhelmed by this deluge of information and this is a challenge on how we tame this information animal for the benefit of our nation. We can utilize the power of information by integrating digitalization on our designs, in which not only a prototype can perform its functions safely and efficiently but at the same time, delivering the vital information in haste.

The Filipino Mechanical Engineer is always in the quest of the holy grail of engineering designs in order to make our lives easier and productive. This is not just a job or profession, but this is a passion, a way of life. With digitalization around, accuracy and efficiency of our designs will increase ten-fold. Information-sharing will be sudden and response time will be swift. The consummation of this technological union will be the higher manufacturing output and faster service response time that surpasses customer satisfaction. Definitely if the Filipino engineer's knack for design and modification is coupled with digitalization, then we are way to go as a nation towards industrial excellence.



THE COVER

By: Leonard P. Meriales
RMEE, ASEAN Eng.

**Theme: "Mechanical Engineer:
Sustaining Digital Transformation
towards Industrial Excellence"**



Since the dawn of Industrial revolution, mechanical engineers were already at the forefront, leading and providing solution to every challenges, from the use of steam to mechanize machines, to electricity for mass production, to electronics and computers for machine automation and now, to digital transformation. Presently, the industry is at its 4th industrial revolution, incorporating the digital technologies to manufacturing process and products to enhance efficiency and business demands. For this year's annual conference souvenir cover with a theme, "Mechanical Engineers: Sustaining Digital Transformation towards Industrial Excellence", features the digital world.

In the cover, the background lines interconnected by a dot aptly describes the internet, a vast network that links computers and other digital technologies around the world. The dots portray the technology used such as computers, mobile devices, cloud computing, internet of things (IoT), digital twin, artificial intelligence, robotics and advance human-machine interface. These are some of the technology utilized nowadays in transforming the manufacturing process into smart industries.

The gear shape in the background preserves the traditional symbol of mechanical engineering profession as the pillar of nation's industrial sector. Moreover, the 2022 theme logo on the lower right embodies the chapter agenda for upcoming year and the "white" color background represents the clarity of chapter program for the general membership.

The globe in the cover represents the world, where distance is not a barrier in communication and information, as internet and technologies provided the links. The high-rise buildings in varying height on top of the globe illustrate the progress of every nations and the impact of digital transformation to their economies. Certainly, digital infrastructure plays a vital role in the country's economic growth, for having a reliable internet is the primary factor in industrial advancement.

"Sustaining Digital Transformation towards Industrial Excellence" is a great task to every mechanical engineer, as we need to keep up with the current digital trends. Accordingly, with the encouragement of our dear chapter PSME-WRSA JC, we must equip ourselves with the latest technological knowledge, as the crusade towards industrial excellence is in our lead.

PSME CREED

We the Mechanical Engineers of the Philippines, conscious of our responsibilities to God, our country and fellowmen. Affirming our adherence to the Code of Ethics for Mechanical Engineers. Desirous in participating and contributing in the social, economic and industrial growth of our country. Determined to support one organization that shall embrace the Mechanical Engineering profession. Have resolve to unite to accomplish these aims by constituting a national organization of Mechanical Engineers.

PSME CORE VALUES

I am a person of **INTEGRITY**. I act with honesty, transparency, and accountability. I do the right things, the right way I maintain **PROFESSIONALISM** at all times with high respect for others, observing proper conduct, following the code of ethics, honoring commitments and acting fairly and with dignity. I strive for **EXCELLENCE** thereby achieving the highest standard of performance in all my undertakings. I internalize **TEAMWORK**. I act with sense of urgency, mindful of entrepreneurial spirit and work with unity, cooperation, collaboration, synergy and convergence towards a common goal. I exercise **LEADERSHIP** with humility and characterized by stewardship. I lead by example, walk the talk and celebrate success as owned by all the members of the team. I embody **CONCERN FOR STAKEHOLDERS** especially the welfare of our members, employees and all we work for and those who work for us. I am an integral part of a **RESILIENT, NATIONALISTIC and GOD-FEARING** Organization. I weather the odds and implore peace, harmony, kindness, good work, love of country and social responsibility.

PSME PRAYER

Heavenly Father, Maker of Heaven and Earth, we thank You for the Filipino Mechanical Engineer, for our profession, and for our organization the PSME. You have sown as seeds, scattered here and abroad, as PSME Engineers- humble planners, designers and builders of all things mechanical- our humble testament to the Glory of Your Creation. We bring before You the fruits of our profession, forged by the fire and burning passion of the PSME mission.

PROFESSIONALISM- to help us maintain the integrity of the Engineering Profession; please keep our hearts true to the highest ethical principles of our field.

SERVICE- to enable us to contribute to the enhancement of science and technology, we pray for all Filipino Mechanical Engineers to work together as one in shaping the economic growth of our country.

MOTIVATION- to uplift the Engineering Profession; please help us promote fellowship and cooperation among all Filipino Mechanical Engineers and to instill nationalism among PSME members.

EXCELLENCE- to enable us to become outstanding PSME members. We pray for all Filipino Mechanical Engineers to actively contribute to the advancement of the profession, to be recognized globally as we develop the talents You have given us.

Help us to provide sustainability to the changing world. May the PSME bring together all Filipino Mechanical Engineers- and as one- stand united as beacons of strength and stability to the world. All these we pray through You, our Heavenly Father, forever and ever. Amen.

OATH OF MEMBERSHIP

I, _____, after having been accepted as a member of the Philippine Society of Mechanical Engineers -Western Region Saudi Arabia Jeddah Chapter, do hereby solemnly swear, that I will defend the Constitution and By-Laws of the society; that I impose upon myself the aforementioned duties upon myself the voluntarily and without reservation and purpose of evasion.



MALACAÑAN PALACE
MANILA

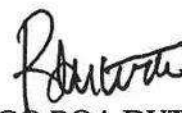
MESSAGE

My warmest greetings to the **Philippine Society of Mechanical Engineers-Western Region Saudi Arabia Jeddah Chapter** as it holds its virtual **18th Annual Conference and General Membership Meeting**.

Overseas Filipino workers play an important role in the development of both their host and home countries. I thus laud our mechanical engineers for exemplifying global competence in their respective companies in Jeddah even as they continue to provide for their families back in the Philippines.

Inspired by your theme this year, may your members find more ways to sustain digital transformation towards industrial excellence, especially as we overcome the pandemic. May these virtual gatherings improve not only your capacity, but also rekindle the spirit of bayanihan and malasakit among yourselves.

I wish you a productive occasion and may you remain our government's strong partner in nation-building. Mabuhay kayong lahat!



RODRIGO ROA DUTERTE

MANILA
3 December 2021

THE PRESIDENT OF THE PHILIPPINES



MESSAGE FROM THE CONSUL GENERAL



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



MESSAGE FROM THE CONSUL GENERAL

Philippine Consulate General in Jeddah

My warmest greetings to all the officers and members of the Philippine Society of Mechanical Engineers-Western Region Saudi Arabia, Jeddah Chapter (PSME-WRSA JC) on the occasion of your 18th Annual Conference and General Membership Meeting.

Since its chartering in 1995, your organization has been very active and dynamic in undertaking various activities such as capacity building programs for your members and other Filipino engineers in the region, community building initiatives, outreach and social development programs, and social events, among others. Filipino engineers and all other professionals in the Kingdom of Saudi Arabia have always brought great pride and honor to the country, with our strong work ethics, hard work, and competence admired not only in the Kingdom but also in many parts of the world.

*Your conference theme **“Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence”** underscores your flexibility and adaptability in the fast changing world, especially with the undeniable importance of digital tools and technology in this time of connectivity, with or without the global health crisis. Mechanical Engineers have to be equipped with the knowledge and skills, not only unique to your profession but also those which may be used in the more effective and efficient delivery of your work. Possessing the skills in the digital platform will play a big role in sustaining excellence in your line of work.*

The Philippine Consulate General in Jeddah continues to support PSME-WRSA JC and all our Filipino community organizations in your objective of professional development and community building. I wish you all the best in the pursuit of your organization's goals.

May you have a productive and prolific virtual conference and meeting. Congratulations and Mabuhay! May God bless you all!


EDGAR TOMAS D. AUXILIAN

**“Mechanical Engineers: Sustaining Digital Transformation
Towards Industrial Excellence.”**





MESSAGE FROM 2021 PSME NATIONAL PRESIDENT



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS INC.
INTEGRATED ASSOCIATION OF MECHANICAL ENGINEERS

PSME NATIONAL HEADQUARTERS

19A Scout Bayoran St. Bgy. South Triangle
Quezon City, Philippines
Tel: (632) 7752-2527

Email: national@psme.org.ph Website: www.psme.org.ph



PSME National President's Message



My warmest greetings and congratulations to the PSME WRSA-Jeddah Chapter as you mark your 18th Annual Conference and General Membership Meeting!

The theme of your event *"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence"* focuses on our common goal for global excellence. And your chapter intends to particularly concentrate on *Digital Transformation* to bring about *Industrial Excellence*.

For us, Mechanical Engineers, it is easier to develop strategies and tools to drive digital transformation for performance improvement. Product development, design engineering, manufacturing and other industrial systems will greatly improve with digitalization. And it will create new levels of productivity, growth, and sustainability.

I am glad that you have learned to adapt to the changes that re-shaped our lives. Let us continue to innovate and help find solutions to setbacks or new challenges confronting our industry so that our organization will be recognized as great contributors to nation building. I have a strong belief that your chapter can do it.

I congratulate the 2021 Chapter Officers as well as those who will serve in 2022. While a position will be attached to your name, bear in mind that Leadership is not a position or title. *It is action and example.* And I believe that *"True leaders don't create followers. They create more leaders."*

I commend you for your strengthened commitment to serve as I wish you a productive ACGMM. Congratulations, PSME-WRSA-Jeddah Chapter! *Mabuhay ang Global Filipino Mechanical Engineers!*

Engr. JERRY D. ASUNCION, PME, FPSME
2021 PSME National President

"Mechanical Engineers: Moving Ahead with the Challenges Towards Nation Building"



"18TH ANNUAL CONFERENCE"



MESSAGE FROM 2022 PSME NATIONAL PRESIDENT-ELECT



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS INC.
INTEGRATED ASSOCIATION OF MECHANICAL ENGINEERS

PSME NATIONAL HEADQUARTERS

19A Scout Bayoran St. Bgy. South Triangle
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Email: national@psme.org.ph Website: www.psme.org.ph



PSME National President-Elect's Message

WRSA-Jeddah Chapter's 18th Annual Conference & GMM

December 3, 2021

It is my honor and pleasure to greet the officers and members of the PSME-WRSA Jeddah Chapter led by President Lee I. Bonifacio, on your 18th Annual Conference and General Membership Meeting today. To my fellow mechanical engineers, guests, friends, ladies and gentlemen, my greetings to all of you! *Mayat ay agew en datako am in. Sapay koma en Ama ed daya, naragsak ya siged tako ed wani ay agew ya si luman.*

For 26 years, the PSME-WRSA Jeddah Chapter has continued to champion its members' welfare, pushing them towards achieving excellence to build a robust and resilient organization. I salute the organizers of this event as it inculcates in everyone that camaraderie, teamwork, and the determination to keep up with PSME's mission, vision and core values do not end with the limitations brought about by the pandemic.

Your theme, *"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence"* is indeed timely and relevant as we find safe means to interact with each other to enhance our knowledge and strengthen our spirit to drive the industry further. But even if digital transformation can be leveraged to design things smarter, engineer things safer, manufacture things faster, and create more value for an organization, let us recognize the key challenges and risks associated with it so we can use more effectively the tools and strategies that digital transformation promises to provide.



As your incoming National President, I cannot promise you everything but I can promise one thing and one thing only. That is to serve and perform the duties incumbent upon the Office of the PSME National President to the best of my ability. I will support whatever meaningful and gainful activities the PSME Chapters will undertake and protect the interest of the general members as a whole. But in exchange, I expect the Chapter Officers to do the same. To continue serving your members unselfishly, supporting the banner programs of the PSME National Board, and protecting the interest of your general membership and PSME. As they say, it takes two to tango.

May this virtual conference, which will showcase technical webinars and product presentations and, more importantly, your general membership meeting, remind you not only of your triumph over challenges, but also reignite your passion to serve your peers and your country. May you inspire each other to be shining examples to your profession, to your global community, and to your future chapter leaders.

In the PSME National, We are honored to have you – the dynamic and committed engineers of WRSA-Jeddah Chapter - as partners in nation-building.

Before I end, may I take this opportunity to express my heartfelt gratitude for all your support during the 69th PSME Annual National Convention. It was indeed a success because of the concerted efforts of everybody. Words cannot describe how grateful I am. As high as the mountains of the Cordilleras, I pray that same support or more will be extended to the PSME National next year.

I wish you a productive and meaningful event. *Mabuhay kayong lahat! Mabuhay ang PSME! Matago tago tako am in!!*

Thank you for inviting me.

ENGR. MELANIE P. BANAYOSI
2022 President-Elect, PSME National

"Mechanical Engineers: The Nation's Prime Mover of Industrial Revolution 4.0"

"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."

19



Your theme: **“Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence”** suits to our present situation in three areas of consideration. First our profession as mechanical engineer. By being digitally competent if not totally, it provides us competitive advantage from those engineers and other professionals who lack this competency. Second, as mechanical engineer who are practicing business entrepreneurship, our knowledge in this field can develop and grow their businesses similar to what IT

experts like Bill Gates, Steve Jobs, Elon Musks, and Jeff Belvo, among others are doing. A third benefit that can be acquired by us on this digital transformation is sharing our IT knowledge to those engineers and other professionals through graduate and advanced programs for their growth and development.

IR 4.0 will soon exit while IR 5.0 slowly gained foothold on the hearts of all enthusiasts and users. This will show how digitalization invaded our way of life and provides us sustainability that no one can imagine.

For us to go with the current trends, it is fitting to know the basic, medium, and the complexities of digitalization that everyone is seeking to excel and to benefit from it either by rewards or by monetization.

In behalf of the 2021 NBODs, I wish to extend to the 2021 chapter BODs and the incoming 2022 chapter BODs a “CONGRATULATORY” statement for a job well-done in spite of the pandemic crisis that all of us encountered. I hope that the year 2022 will provide us better life, good health and continuous protection from our Almighty God.

God bless us all with prosperity in life!

My best regards,

Eduardo P. Malagapo, 5PHDs, PHDM(C), DrFRIM, FRIEdr, FPSME,
National VP for External Affairs
2022 National Board-Elect
PSME-SA Charter & 1991 President



MESSAGE FROM PSME NATIONAL VP MIDDLE EAST



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



On behalf of PSME Middle East Chapters, I would like to convey my congratulations to the Board of Directors, Officers, and members of the PSME-WRSA Chapter under the leadership of your dynamic Chapter President Engr. Lee I. Bonifacio for successfully holding its 18th Annual Conference (Virtual) and General Membership Meeting. As your 2021 Vice President for Middle East of the PSME National, it is indeed a great pride and honor to impart messages of this significant event.

Your theme **“Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence”**, is timely and relevant specially on this digital revolution underway. Digital transformation such as AI, IoT to Cloud, Blockchain and Cybersecurity changes the technological methodology in terms of communication, education, medicine, transformation, farming and manufacturing. As Mechanical Engineers, we should encourage to explore, learn, and be updated in the latest digital transformation that affects not only industries and business but also our professional and personal life. One way to acquire knowledge on digital transformation is by reading more and attending technical webinars and even join our PSME National Technical Division.

Reaching the 18 years of existence for the noble service of Filipino Mechanical Engineers in the Western Region is truly remarkable accomplishments. Your chapter have continuously brought its high quality of services to the general membership in uplifting their professional career thereby conducting trainings, seminars and short courses and producing quality leaders. You should be thankful for all former leaders whose devoted their talent, wisdom, dedication, and encouragement have led your chapter to where you are now.

Today your chapter will elect new set of leaders that would lead in stirring your chapter to the next level excellence. To the 2021 Board of Directors and officers, congratulations for the excellent performance and accomplishments despite of amidst the pandemic condition.

To the working committee of this event, congratulations once again. Lastly, my deep gratitude to the PSME-WRSA for the great support and cooperation in the duration of my term as 2021 Vice President for Middle East Region (VPME). Long live PSME-WRSA!

ROHENIO L. PANGILINAN, PME, FPSME, ACPE, ASEAN Eng.
VP Middle East - PSME National

**“Mechanical Engineers: Sustaining Digital Transformation
Towards Industrial Excellence.”**





COVID-19 pandemic has created unparalleled challenges in all the nations and professions. We remain steadfast in our mission as professionals, mindful of the risk behind our mask, we are unstoppable, we continue to dedicate ourselves to identify potential ways we can provide to overcome this worldwide crisis that had shaken all the aspects of our lives. Each of us has a call of duty to perform. We chose how we live our lives and how we embrace the challenges. In the competitive global market that the digital age transformation has created along with the pandemic, engineers are under more pressure to be more productive. The decisions that engineers make everyday increasingly impact our world, environment and the sustainability of our future.

The pandemic has highlighted the importance in investing in digital transformation. Key tools in the engineering workflow will allow the role of a mechanical engineer evolve to an agile innovations, they need more precise tools for their work to do it effectively and education must combine technical excellence with the ability to lead, influence and integrate which I personally witnessed and experienced, deeply humbled and honored working hand-in-hand, with Philippine Society of Mechanical Engineers- Western Region Saudi Arabia Jeddah Chapter, under our umbrella organization, the Philippine Professional Organization Western Region Saudi Arabia, where a strong leadership as member of the organization was executed and I am beyond grateful for their excellent interpersonal skills and ability to inspire and motivate others to drive a team to achieve success. They have creative solutions and natural aptitudes, and as you are celebrating your 18th Annual Conference and General Membership Meeting, I would like to congratulate you all for keeping abreast in delivering the best value and quality of work, lucky KABABAYANS in our Ventilation project in Bahay Kalinga, more power to your organization!

Our professions are all challenged and sustaining digital transformation towards excellence is not a simple success or failure, it is a journey that would really make a difference and the attitude conducive to professional practice will ultimately fulfill its purpose when applied, requiring a lot of patience, optimism, resiliency, integrity and a sense of purpose because we are all called for a mission and may we use our profession as a vehicle that no matter how complicated the world would be, we spread GOD's love to humanity. Again, congratulations to all of you and I wish you all beautiful life and a meaningful career.

More power to PSME-WRSA-JC.
MABUHAY FILIPINO MECHANICAL ENGINEERS!!!

ALL GLORY AND PRAISE TO GOD
VERONICA ROYOL-BOLINAO, RTRP
PRESIDENT PPO-WRSA 2021
PRESIDENT ARCPP-KSA INT'L CHAPTER 2017-2021



MESSAGE FROM CHAPTER PRESIDENT



Congratulations to PSME-WRSA Jeddah Chapter on its 18th Annual Conference and General Membership Assembly. This is the climax of this years' remarkable service to our supreme members, another milestone to celebrate and commend for the chapter's commitment and resiliency.

This year's annual conference theme: **“Mechanical Engineers: Sustaining Digital Transformation towards Industrial Excellence”** is relevant to our fast pace changing world in technological advancement. As the digital transformation had reached educational institutions, commercial establishments and our homes - in the palm of our hands; our profession should stay relevant by innovating ourselves, upgrading our skills and knowledge in order to adapt. It is our great responsibility to sustain a smarter technology that will save the natural resources and reduce carbon dioxide emissions to lessen the impact in our natural habitat.

We are in the 27th year of service. Our organization became a way of life for professionals who committed themselves to excellence.

I would like to express my deepest gratitude to the executive officers, directors and council of past presidents who demonstrated professionalism and promoted camaraderie; to the benevolent sponsors and generous members, despite of the economic challenges had extended their support. This success was made possible through our collective efforts and passion to serve.

Mabuhay ang PSME-WRSA Jeddah Chapter!

God Bless PSME.

Lee I. Bonifacio, RMEE, M.A., ASEAN Eng.
Chapter President



Greetings.

It is with pride to say that I am a part of this esteemed organization, the PSME – Western Region Saudi Arabia Jeddah Chapter. For 27 years and going strong, WRSA has proven once again the spirit of Bayanihan within its members. Even in the face of this global challenge and national issues we have kept our feet on the line and continued to serve and assist with utmost dedication our general membership.

And on the 18th Annual Conference with the theme “Mechanical Engineers: Sustaining Digital Transformation towards Industrial Excellence”, we are again being challenge by time to continue our advancement through digital technologies, may it be from our personal awareness and professional skills towards the success of the industries we belong to.

I congratulate all the Members, Board of Directors, Past Presidents, Past Officers, including the men and women that were part of the 27 years of existence of PSME-WRSA JC. Your participations and contributions to the chapter indeed bore fruits as we now celebrate our 18th Annual Conference.

Hats-off to the 2021 Board of Directors for a job well done. Welcome 2022 Executive Officers & Directors. Let us serve our general membership to the best of our abilities while adhering to our Creed and Core Values.

Mabuhay ang WRSA. Mabuhay ang PSME.

We are one with PSME.

Engr. Jose Melvin Santos
VP External Affairs
Conference Co-Chairman



Bliven U. Garcia, RMEE

Information Technology Director 2021

PSME-WRSA Jeddah Chapter

Writer Khalil Gibran once said, "I prefer to be a dreamer among the humblest, with visions to be realized, than lord among those without dreams and desires," and as the 2021 Information Technology Director, I want to share that we, as Mechanical Engineers, should never stop being dreamers.

We all have different dreams and aims in life. Some focus on career, some aspire financial stability, some choose excellent knowledge and education, some want great social life, while some seek good relationships. Dreams are also created in various ways. There are those who spend countless hours to craft what their aims in life would be. There are some who come to a sudden realization of what they want to do. And there are others who already have life ambitions and professional goals since their childhood. I am one of those dreamers.

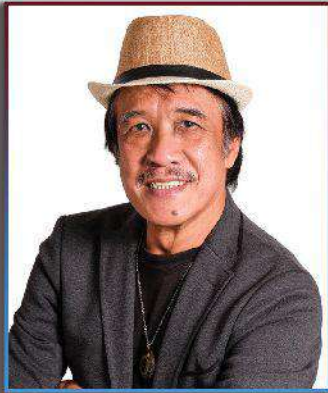
Being a Mechanical Engineer and working here in Kingdom of Saudi Arabia are paths I have chosen. This profession and the field where I belong to are fulfillment of my dreams and what I want in my life. And as I achieve this childhood dream, I am again ready to dream some more and continue to work hard to attain them.

But success is easier said than done. Achieving our dreams and reaching our goals come with many failures. However, we have to cherish our dreams and arm ourselves with hard work, and strong willpower. Only through determination and using our talents and abilities can we work around the difficulties and trials that may come our way.

Today, we may be in various points in our lives. Some already achieved their dreams; some are still struggling and toiling to reach them; while some are at the lowest point and are facing difficulties to even start or be back on their feet. Nonetheless, we should not go astray and lose our focus. Let us find our inspiration and be grateful that we have PSME as an organization to lend us a hand. Let us continue dreaming and let us continue working to achieve them.

Congratulations to our new 2022 Officers and BODs.

Go step ahead, PSME-WRSA JC. Let us reach our dreams.



Napoleon M. Cepriaso, FPSME, PME, ASEAN Eng.
2012 Chapter President, PSME-WRSA JC
2016 Fellow Awardee
2002 & 2011 TOME Awardee

This year's theme ***"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence"*** is very relevant to the ever-changing environment to the way we, mechanical engineers, should perform our tasks. Incorporating the digital aspects into our mechanical system in the design, operation and maintenance, has become a norm.

My sincere congratulations to the **2021 BOD of PSME-WRSA Jeddah Chapter** headed by **Pres. Lee I. Bonifacio** on its 18th Analcon. Despite the current issue the Society is facing at the national level, you have demonstrated your resilience and ability to cope up with the circumstances, holding your position and loyalty to the beloved Society. Once again, you guys have done a wonderful job for the Chapter, the National office, and the community.

Reminiscence of 2012 national issue at the time of my presidency, the Chapter has stood still and held to its position against all odds. Though the situation then was not in parallel with the current one, it has demonstrated good leadership training among the officers of the Chapter. I look forward to the upcoming 2022 set of officers to maintain and keep the legacy of the Chapter which has been in existence for 27 years. Mabuhay po tayong lahat.

My heartfelt congratulations on the **18th Analcon of the PSME-WRSA Jeddah Chapter** and to the 2021 BOD led by **Pres. Lee I. Bonifacio**. I am proud to be part of this prestigious organization and I am sure our commitment with the general membership will continue to strengthen, even in the toughest times.

You have done a great job to the Chapter, the National Office, and to the community.

I look forward to the forthcoming 2022 set of officers to preserve and possess the heritage of the Chapter which has been in existence for 27 years.

Mabuhay po tayong lahat at ang PSME-WRSA Jeddah Chapter!



Wilfredo R. Ruiz, FPSME, PME
2000 & 2004 Chapter President,
PSME-WRSA Jeddah Chapter
2000 Most Outstanding Chapter President
2004 Most Outstanding Mechanical Engineer (TOME)
2012 & 2017 Fellow Awardee



Jemuel B. Esguerra, PME
2018 Chapter President
PSME-Jeddah Western Region

CONGRATULATIONS PSME-WRSA Jeddah Chapter for holding its 18th Annual Convention. Eighteen long years of conferences, seminars, plant tours, get-together, sports activities, community service and a total of Twenty Six years of existence full of ups, downs and challenges is truly a great feat for a chapter outside our motherland. Time and again, you proved that there's no complex situation could stop you from serving the General Membership.

The theme ***"Mechanical Engineers : Sustaining Digital Transformation Towards Industrial Excellence"*** speaks for itself that we, as Mechanical Engineers, must cope up with the latest trend in the industry today where great ideas are being collected and placed into "smart systems" for more efficient and environmental-friendly products. I personally encouraged everyone to continue empower and equipped yourselves with knowledge not only by attending the chapter's activities but by challenging yourself to be better than what you were yesterday.

Again my heartfelt congratulations to the General Membership, Board of Directors, sponsors and friends who made this convention truly a SUCCESS.

Salute to all of you guys for another year of achievement.



Danilo Gercio, PME
1998 President PSME WRSA JC

Many challenges has brought the PSME WRSA JC to where it is now. In 1998, from the first issue of PSME WRSA JC Prime mover Newsletter by PP Ruben Serrano PME, first conceptualization and start of RMEE review by Engineer Rizalino Nobleza PME and to the first enhancement of Technical Seminars topics, venues and logistics by PP Filemon Agulo PME, many very important achievements had been accomplished by the Society every year till today the world renowned practice of video conference Seminars, Conventions, etc.

Each of us in the Society has our share of responsibility and objective to accomplish and so far the current board members had lived up to the same expectation and sometimes even more that is "always do your best."

I am very sure that We in the Council of the Past Presidents are delighted and pleased to know that our previous efforts and time will not be lead to waste and will always be looking forward to a better Society each year.

Congratulations and many thanks to the board members of PSME WRSA JC 2021 for sharing their best effort and time for the membership to give them what they fully deserve making this year one of the most inspirational and encouraging year of the PSME WRSA JC. Always dream and achieve more...



Crisostomo C. Ortiz, PME, ASEAN Eng.
2014 Chapter President
2011 President-PSME-WRSA Toastmasters Club
2012 Tome Awardee

Congratulations to PSME-WRSA Jeddah Chapter on its 18th Annual Convention and 27 years of service.

Once again we have survived seemingly the never ending challenge in the year 2021 but with your strong determination and passion our organization is quite strong. To our Officers and BOD of 2021 headed by Engr. Lee I Bonifacio, you have done a great job for our organization.

"Mabuhay po tayong lahat"

My sincere congratulations to the 2021 BOD of PSMA-WRSA Jeddah Chapter headed by Pres. Lee I. Bonifacio on our 18th Analcon. The strength and perseverance that you have made resembled the true dedications that we tried to derive for a long time that proved to be helpful to our Chapter, our National Office, and our community. The involvement of our chapter on the national issues strengthens our place as an important entity of a Mechanical Engineering legacies. The 2021 Board of Directors' ability to cope-up with the circumstances made our group more important in looks and likes of our National Office.

It was in my time of Presidency that there was a big turmoil on the National Office due to misunderstandings that was logged in court that split our group into different factions but we stood still. We continued the role of a good Chapter and turned-over stable accomplishments. We inhibit a fare decisions to enhance togetherness to each and everyone on our PSME-WRSA Chapter.

I am now at General Santos City, looking forward to the upcoming 2022 set of officers to enhance our Chapter and pursue our goal for the better.



Wilfredo C. Leoncio, PME
2006 Chapter President, PSME-WRSA JC
Most Outstanding Chapter Award, Year 2006



Rainier Plamenco Patawi, ME

2011 Chapter President

TOME 2011 - Information Technology

PSME - Most Outstanding Member Year 2007

Forsspac MBR Corporation - MEP Manager

Plaridel Water District - Board of Director (Vice-Chairman)

Rainerhiya Construction (OPC) - Director/President

Let me congratulate the Year 2021 Board of Directors of the PSME-WRSA Jeddah Chapter spearheaded by Chapter President - Engr. Lee I. Bonifacio on its 18th Annual Conference.

The ANALCON Theme - "Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence" is a great challenge to our society to promote a strategy which our organization will align mechanical engineering technology with sustainable goals. A digital resilience through digital transformation will be a leading new era of change around the world that will help our profession.

In the end, let me thank the PSME-WRSA Jeddah Chapter for being the organization that honed my professional competencies, leadership styles, communications skills and true service above self that I am applying now to our beloved country from being a former OFW for 20 years - in this regard, I am encouraging all members to actively participate and serve the Chapter to benefit the rewards of being an active member and officer of the PSME-WRSA Jeddah Chapter.

Congratulations PSME-WRSA Jeddah Chapter on its 18th Annual Convention and General Membership Meeting! another year of successful accomplishments added to the achievements of the chapter. Credit to the 2021 Board of Directors under the leadership of Engr. Lee Bonifacio, Chapter President, for a job well done.

The theme, "Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence" is a timely mission to accomplish while facing restrictions brought by the current pandemic. A challenge the incoming 2022 BODs will face with but rest assured that with the vast experiences of the general membership of the chapter: consolidating, enhancing, and sharing these experiences thru technical seminars using any available platform will lead to its realization.

Mabuhay ang PSME-WRSA Jeddah Chapter!



Ruben B. Serrano, PME

2015 Chapter President (PSME-WRSA JC)

2016 Chapter President (JWRC)

2016 - 2017 Deputy VP-Middle East (Western Region, SA)

2017 TOME Awardee



Engr. Aldrin Alizon D. Lango
RMEE, ASEAN Engr.

Chapter President 2019 & 2020

2018 TOME Awardee

"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence" as the keynote for the Fiscal Year 2022 of PSME-WRSA JC is of great relevance. Though digital transformation has been recognized from the past decades, it has gained its prominence in technological advancement as industries transcends to thrive with the challenges of the Covid-19 pandemic.

The phase of change has truly accelerated to a breakneck speed so we the Filipino Mechanical Engineers shall keep ourselves abreast with the new trends of development and be equipped with the necessary competencies to sustain the requisites of the new normal.

My Warmest congratulations to the Executive Officers and Board of Directors of 2021 for job well done and as our Chapter continue to thrive with the pandemic, we have truly built a robust and resilient PSME-WRSA JC ready to respond to extreme global challenge!



ANNUAL CONFERENCE WORKING COMMITTEE



CHAPTER PRESIDENT/CONFERENCE CHAIRMAN:

LEE I. BONIFACIO, RMEE, M.A., *ASEAN Eng.*

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CHAIRMAN ADMINISTRATION:

MARIA MAY M. ATOLE, RMEE, RMP, *ASEAN Eng.*

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CHAIRMAN PUBLICATION:

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NIÑO JOSE A. LOPEZ, RMEE

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ALDRIN ALIZON D. LANGO, RMEE, *ASEAN Eng.*

NAPOLEON M. CEPRIASO, FPSME, PME, *ASEAN Eng.*

CRISOSTOMO C. ORTIZ, PME, *ASEAN Eng.*

WILFREDO R. RUIZ, FPSME, PME

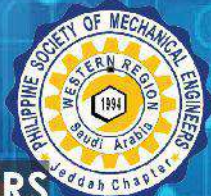
SOUVENIR PROGRAM GRAPHIC ARTIST:

ARABELLE JUSTINE P. SANTOS

**"Mechanical Engineers: Sustaining Digital Transformation
Towards Industrial Excellence."**



CHAPTER PRESIDENT'S REPORT



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

PSME-WRSA Jeddah Chapter is on its 27th year of remarkable service and existence. The 2021 Executive Officers and Directors had demonstrated resiliency, determination and dedication to overcome all the challenges. We had accomplished our aims with the overwhelming support from the Council of Past Presidents. The existence of various virtual platforms - meetings, webinars and conferences were made possible.

It is my humble desire to report our activities, accomplishments and achievements of the year 2021.

Thanksgiving and Planning of Activities

In the midst of the pandemic with eased health protocols mandated by the government, on January 7 and 8, 2021, we had a thanksgiving get-together led by the 2021 BOD's, to relax, unwind and experience camaraderie among the members in a beach resort at Obhur, Jeddah. At the same time, a successful annual planning of activities was concluded by the 2021 Board of Directors to kick start the new fiscal year.

Sports and Physical Activities

In the first few months of the year, while waiting for the approval of the application of CPD points for the prepared technical webinar, we invited and encouraged the general membership to meet and engage in physical activities every Friday morning at a park near Al Salam Mall to reduce the stress brought about by the lockdowns caused by the pandemic and boost our body's immune system.

Constitution and By-Laws (CBL) Amendment

PSME-WRSA JC CBL amendment was proposed to serve the growing number of members in the Philippines who desired to keep their membership with WRSA Jeddah Chapter. A committee was formed and chaired by our Code of Ethics Director Engr. Noriel J. Nollora and had held various meetings. The proposed CBL amendment was presented and approved by the Board of Directors last November 2, 2021 and due for ratification on the 18th Annual Conference and Virtual General Membership Meeting on Dec 3.

Physical Inventory

Our chapter auditor Engr Leonard P. Meriales conducted inventory of chapters' office equipment, supplies and stationaries in our headquarters and concluded the physical audit on Jan 22.

Membership and RFID Payment

The chapter is keen on reaching out to our fellow mechanical engineers. We were able to induct 4 new members that were added to the chapters' strength. More so, to keep our commitment to the general membership, our chapter renewed their membership and paid the fee of 22 regular members and 6 associate members to PSME National. To support the RFID project of PSME National, we had paid the RFID fee for 71 outstanding members and the fee was borne by the chapters fund.



CHAPTER PRESIDENT'S REPORT



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

ASEAN Engineering Register Conferment of PSME-WRSA JC Members

Three (3) of our members were virtually conferred last April 10, 2021 during the 2021 ASEAN Engineering Register Conferment Ceremonies 2021-02, by the Philippine Technological Council. Our outstanding members are:

1. Engr. Amos Joel A. Acosta
2. Engr. Liza L. Acosta
3. Engr. Lee I. Bonifacio

In addition, ten (10) of our members were conferred in a hybrid set up last July 16, 2021 during the 2021 ASEAN Engineering Register Conferment for Western Region of Saudi Arabia. Wherein, some of the conferees attended physically; and the rest attended virtually together with the representatives of Philippine Technological Council. It was made possible through the effective collaboration between the PSME-WRSA Jeddah Chapter and the Institute of Electronics Engineers of the Philippines, Inc – KSA WRC. Our outstanding achievers are:

1. Engr. Maria May M. Atole
2. Engr. Napoleon M. Cepriaso
3. Engr. Aldrin Alizon D. Lango
4. Engr. John Ray O. Madla
5. Engr. Leonard P. Meriales
6. Engr. Orlan C. Moriones
7. Engr. Crisostomo C. Ortiz
8. Engr. Antonio Elmer L. Quintilla
9. Engr. Oliver O. Salazar
10. Engr. Jose Melvin D. Santos

Meetings, Conference and Convention

As your incumbent Chapter President, I represented our Chapter in various meetings called by the PSME National and Middle East Chapters.

Our chapter actively participated in the 12th Middle East Regional Conference hosted by PSME-UAE Chapter. It was concluded on October 8 and 9, 2021. Our members actively participated and attended the 69th NatCon activities. Our very own BOD, Engr. Noriel J. Nollora won the 2nd major prize in the raffle draw.

Mid-Year General Membership Virtual Conference

Our Mid-Year General Membership Virtual Conference was conducted last June 25, 2021 and successfully chaired by Engr. Niño Jose A. Lopez. It showcased 3 technical presentations and graced by our PSME National leaders and BME Chairman Leandro A. Conti as the Guest of Honor.

E-Newsletter "Prime Movers"

The official newsletter of PSME-WRSA JC is back, after a long, long years. Thanks to the collaborative effort of the BOD's and past presidents.

We were able to release Volume 16 in 2 Issues, in June and September 2021 respectively.

It is worth mentioning the people behind the "pagbabalik" of our newsletter:

Editor-in-Chief – Engr. Jose Melvin D. Santos

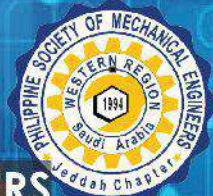
Managing Editor – Engr. Niño Jose A. Lopez

Editorial Staff – Engr. Bliven U. Garcia and Engr. John Ray O. Madla

Contributors – PP Napoleon M. Cepriaso, Engr. Napoleon M. Castañeda, Engr. Oliver O. Salazar
Engr. Leonard P. Meriales, IPP Aldrin Alizon D. Lango and Engr. Lee I. Bonifacio



CHAPTER PRESIDENT'S REPORT



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

Plant Tours

We had our plant tour in two batches, on September 24 and October 1, 2021, respectively, at Saudi Dairy and Foodstuff Company (SADAFSCO) Ice Cream factory in Ph. 1 of Industrial City 1 led by Engr. Roy M. Tumamak and our associate member Mr. Antonio Elmer L. Quintilla.

Philippine Professional Organization

Our Chapter representatives had actively participated in all PPO-WRSA activities. Engr. Aldrin Alizon D. Lango served as the 2021 PPO-WRSA Secretary and Chaired the CBL Amendment Committee, Engrs' Jose Melvin D. Santos, Julius M. Cañeca and Lee I. Bonifacio served as Board of Directors. As a member organization, we led the ventilation enhancement program of the female ward of Bahay Kalinga at the Philippine Consulate General - Jeddah.

Webinars

We had conducted the following technical webinars in order to support the chapters' continuing professional development of its members and other professionals:

1. "Future-Proof Buildings for the Changing Climate" by Engr. Ace Glen B. Garcia held last May 28, 2021.
2. "Boiler Safety Procedure and Maintenance" by Engr. Crisostomo C. Ortiz held during the 2021 Mid-Year General Membership Virtual Conference.
3. "Elevator Design and Standards" by Engr. Lorenzo O. Gaviola held during the 2021 Mid-Year General Membership Virtual Conference.
4. "Solar Photovoltaic Grid Interactive Design" by Engr. Ahmed L. Selim during the 2021 Mid-Year General Membership Virtual Conference.
5. "Refrigeration and Air-conditioning Hybrid Workshop" by Engr. John Ray O. Madla held last August 20, 2021 at Obhur, Jeddah.
6. "Getting Chartered – Process of becoming an Engineer in the UK and Commonwealth of Nations" by Engr. Ace Glen B. Garcia held last November 12, 2021 during the General Membership Meeting and Election of 2022 Board of Directors.
7. "Stocks, Mutual Funds and REIT's: Are they Good Passive Investments" by Engr. Napoleon M. Cepriaso held last November 12, 2021 during the General Membership Meeting and Election of 2022 Board of Directors.

Again, I would like to express my sincerest gratitude to the 2021 Board of Directors, the Council of Past Presidents and PSME National Officers for their unselfish support.

Thank you very much for giving me the opportunity to lead and serve the Philippine Society of Mechanical Engineers – Western Region Saudi Arabia Jeddah Chapter

Long Live PSME-WRSA Jeddah Chapter. Long Live PSME.

God Bless Us All.

Lee I. Bonifacio, RMEE, M.A., ASEAN Eng.
2021 CHAPTER PRESIDENT

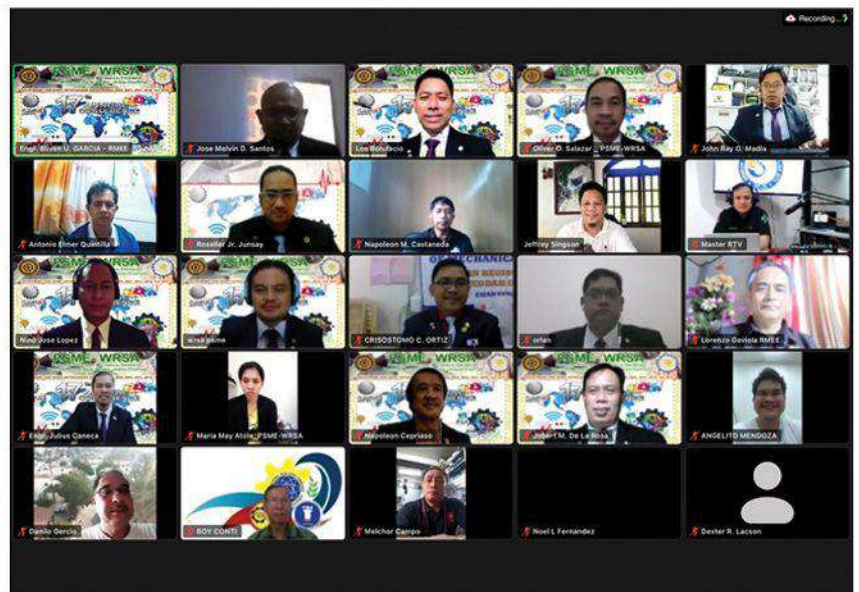
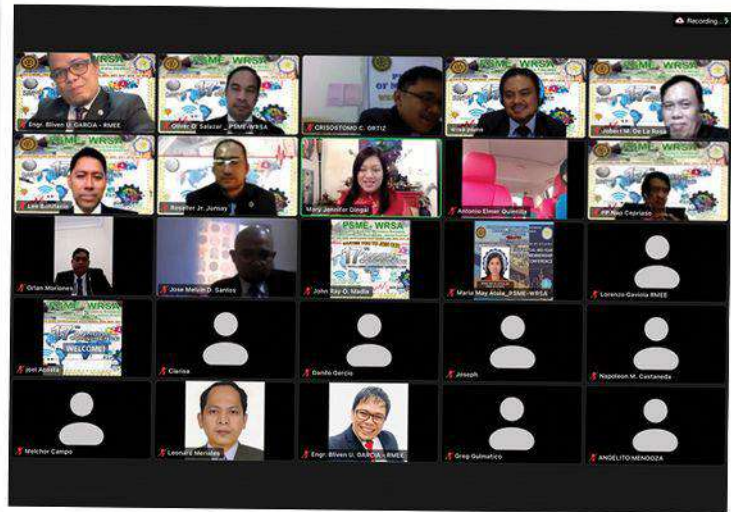




17TH ANNUAL CONFERENCE



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."





On January 7-8, 2021, the PSME-WRSA JC conducted its Annual Planning & Thanksgiving in Obhur. This was the first face to face activity we had after a long time of restriction on gatherings because of the global pandemic.

We had our venue meet-up on January 7 starting @ 4pm. We had dinner, sing-along with the members and family and we shared stories of our fond memories with the PSME-WRSA JC until late night. The following day, after a good rest, we enjoyed walking along the footbridge of the coast. Some also enjoyed swimming and others stayed in the Villa to prepare our breakfast. We took our breakfast together to energize and get ready for our main agenda, our Annual Plan.





The Philippine Professional Organization - Western Region Saudi Arabia (PPO-WRSA) is composed of 14 Member Organizations namely: PSME-WRSA JC; PICE-WRSA; IIEE-WRCSA; PICPA-WRSA; UAP-KSA WRC; PNA-J; PSME-JC; IECEP-KSA-WRC; PSART-WRC; FDK-WR; ARCPP-KSA; IIEE-NWRCSA; PSME-Y&R; and PISTA.

PSME-WRSA JC is represented by:

Engr. Aldrin Alizon D. Lango	PPO-WRSA Secretary
Engr. Lee I. Bonifacio	Board of Director
Engr. Jose Melvin D. Santos	Board of Director
Engr. Julius M Cañeca	Board of Director





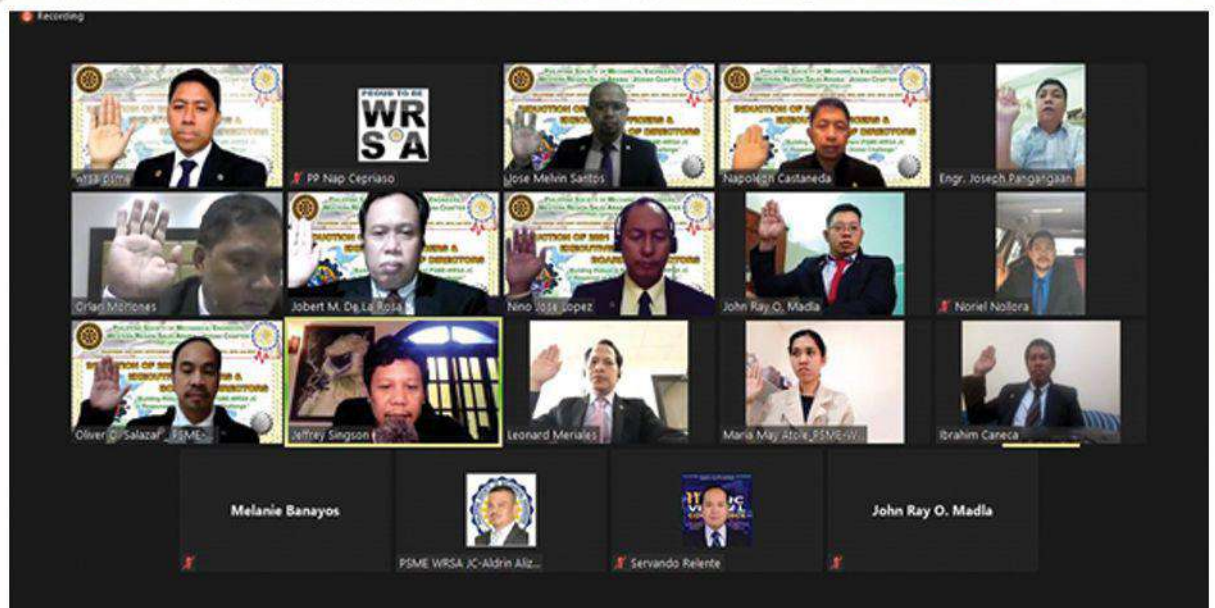
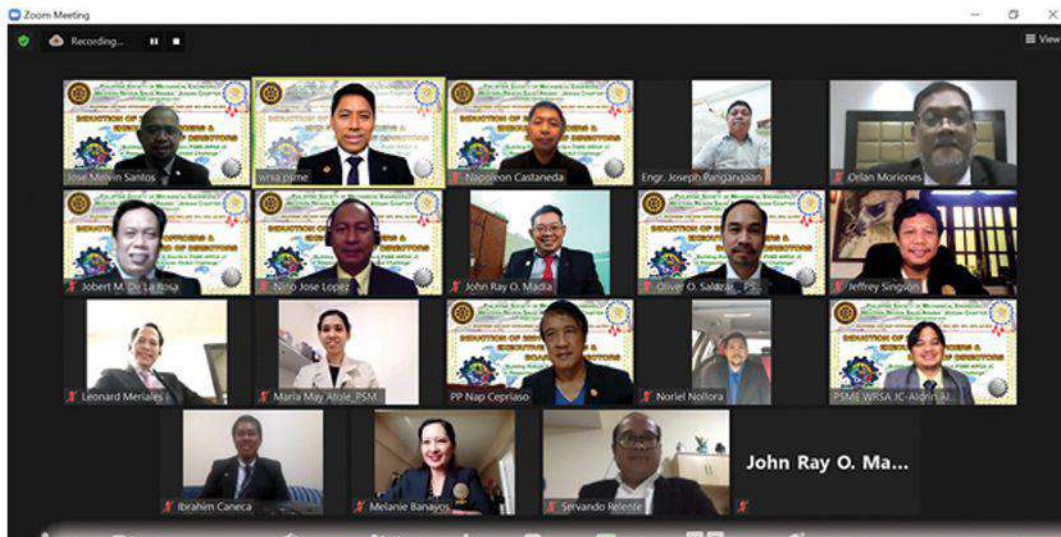
INDUCTION OF 2021 BOD'S BY PSME NATIONAL



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



On 29th of January 2021, this year's PSME-WRSA JC Executive Officers and Board of Directors were inducted to office via virtual conferencing. Present during the event were the PSME National President - Dr. Jeffrey F. Singson as "Guest of Honor & Inducting Officer", VP for Middle East - Engr. Servando III Relente as "Inspirational Speaker" and National Secretary - Engr. Melanie P. Banayos as Guest.



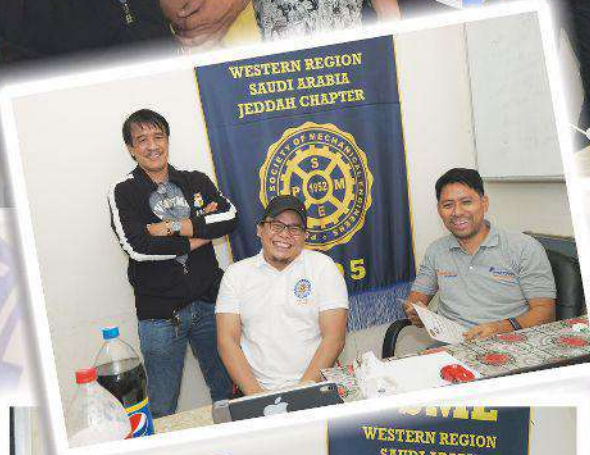
"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."







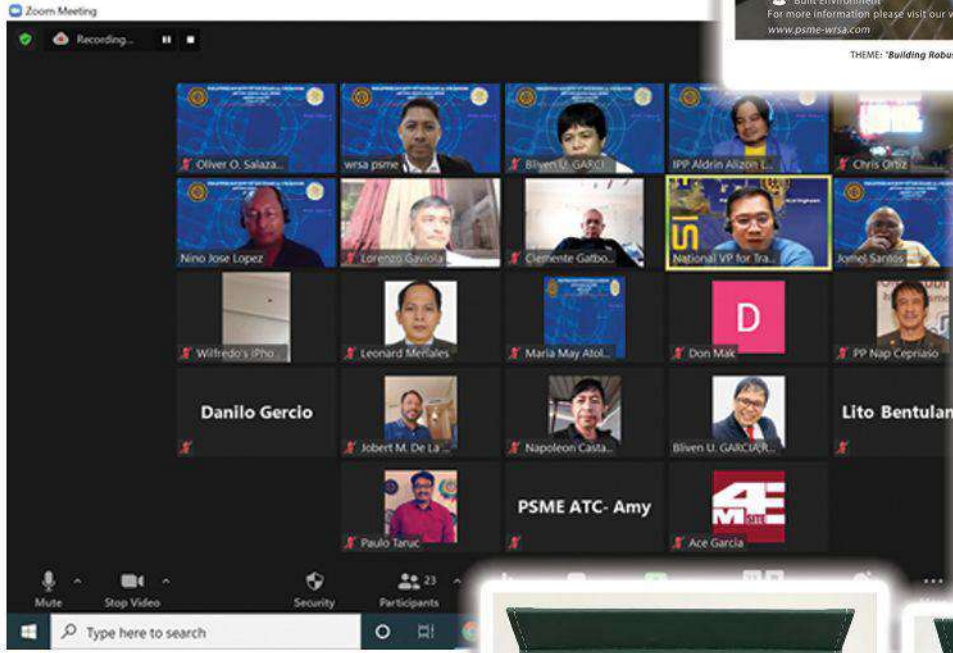
LAST TOAST FOR ITD BLIVEN





1ST TECHNICAL WEBINAR

PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
WESTERN REGION SAUDI ARABIA
JEDDAH CHAPTER
Chartered 1995
Website: www.psme-wrsa.com
MOST OUTSTANDING CHAPTER YEARS: 2005, 2006, 2007, 2011, 2012 and 2013

Technical Webinar

"Future-Proof Buildings for the Changing Climate"

TECHNICAL SPEAKER:
Engr. Ace Glen B. Garcia, PMP, EP, LEED AP, WELL AP, MAT 4Site Mechanical Designer and Energy Modeling Lead

INSPIRATIONAL SPEAKER:
Engr. Eric Marren A. De Luna, PME
PSME National VP for Training & Education
Chairman of the Advanced Training Center (ATC)

GUEST SPEAKER:
Engr. Ruben B. Serrano, PME
PSME Jeddah Chapter President

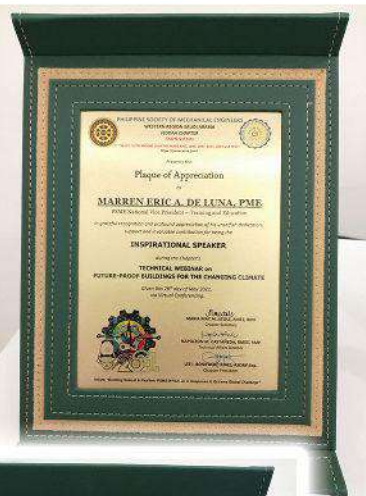
FRIDAY 28 MAY 2021
1:00 PM - 4:00 PM (KSA Time)
6:00 PM - 9:00 PM (Phil. Time)

VIA **Zoom**

FOR INQUIRIES PLEASE CALL:
Engr. Lee Bonifacio
054 911 5881
Engr. Jose Melvin Santos
055 122 0956
Engr. John Ray Macia
056 404 5683
Engr. Nino Jose Lopez
034 204 4768
Engr. Maria May Atole
038 915 1605

Technical Presentation Outline:
Climate Change: Beyond the Threshold
Designing Resilient Buildings
Climate Resilience and Social Equity in the Built Environment
For more information please visit our website: www.psme-wrsa.com

THEME: "Building Robust and Resilient PSME-WRSA JC in response to extreme challenge"



The 1st Technical Webinar was held last May 28, 2021 through virtual platform Zoom.

Inspirational Speakers were:
Engr. Eric Marren A. De Luna, PME
PSME National - VP Training & Education
Engr. Ruben B. Serrano, PME
PSME-JWR Charter President

Technical Resource Speaker:
Engr. Ace Glen B. Garcia
PMP, EP, LEED AP, WELL AP,
Mechanical Designer and Energy Modeling Lead at
MAT 4Site Engineers in Toronto, Canada.

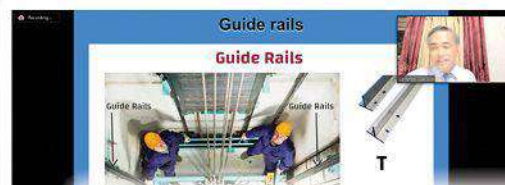
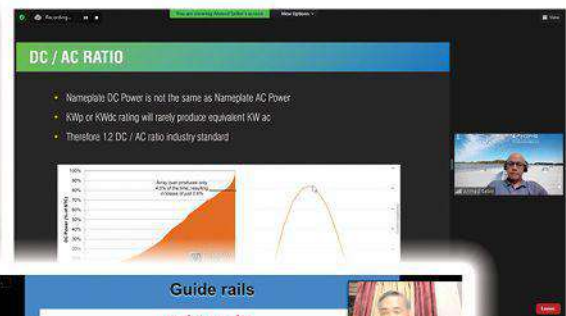
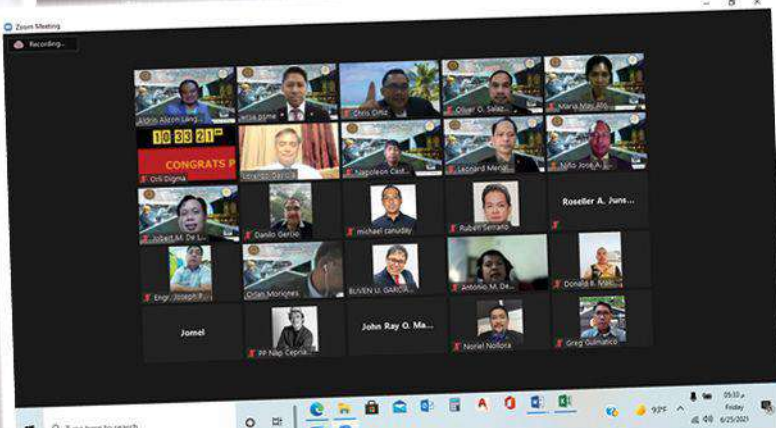
"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."



MID-YEAR GENERAL MEMBERSHIP VIRTUAL CONFERENCE



The 2021 Mid-Year General Membership Virtual Conference (MGMVC) was held last 25th June via Zoom. The event kicked-off at 9:00 AM (Saudi Time) with the Formal Opening by our Vice Pres. Internal Affairs cum Conference Chairman, Engr. Niño Jose A. Lopez



**PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
WESTERN REGION SAUDI ARABIA
JEDDAH CHAPTER**
Chartered 1995
<https://www.psmc-wrsa.com>
"MOST OUTSTANDING CHAPTER YEARS 2005, 2006, 2007, 2011, 2012 and 2013"

2021 MID-YEAR GENERAL MEMBERSHIP VIRTUAL CONFERENCE

Guest of Honor:
Hon. Leandro A. Conti
Chairman, Board of Mechanical Engineering

Keynote Speaker:
Jerry D. Asuncion, PSME, PSME National President

International Speaker:
Roberto Pangilinan, PSME PSME Nat'l Vice Pres. for Middle East

Technical Presentations:

- Boiler Safety Procedure & Maintenance
- Elevator Design & Standards
- Solar Photovoltaic Grid Interactive Design

Product Presentations

Raffles and Prizes

VIA ZOOM

**FRIDAY
25 JUNE 2021**
8:30 AM - 5:30 PM (KSA Time)
1:30 PM - 10:30 PM (Phil. Time)

In Partnership With:

Technical Industrial Association Inc.

FOR INQUIRIES PLEASE CALL

- Engr. Lee Bonifacio 024 911 5681
- Engr. Jose Melvin Santos 025 122 0956
- Engr. John Ray Madia 026 404 9883
- Engr. Niño Jose Lopez 023 204 4768

THEME: "Building Robust and Resilient PSME-WRSA JC in response to extreme challenge."



ASEAN ENGINEERING REGISTRY HYBRID CONFERMENT



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



The Philippine Technological Council - Middle East and North Africa Affairs (PTC-MENA) organized that momentous event and hosted by the collaborative forces of two engineering chapters based in Jeddah, the PSME-WRSA JC and IECEP-KSA-WRC. The event entitled 2021 ASEAN Engineering Register Conferment was held last Friday, July 16, at Emerald hotel in Jeddah and simultaneously on-line via zoom. It was a hybrid conferment, a combination of physical and virtual gatherings, where the conferees were physically present in the hotel (following the limited capacity as per Kingdom regulations on health protocols) while on the virtual platform were the conferring officer, guests and families of the conferees.

**"Mechanical Engineers: Sustaining Digital Transformation
Towards Industrial Excellence."**



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
WESTERN REGION SAUDI ARABIA
JEDDAH-CHAPTER
Chartered 1995
<https://www.psme-wrsa.com>
"MOST OUTSTANDING CHAPTER BY ASSE (2008, 2009, 2011, 2012 and 2013)"

REFRIGERATION AND AIR-CONDITIONING WORKSHOP

Technical Speaker:
Engr. John Ray O. Madia, ASEAN Eng.
Membership Director - PSME-WRSA JC

Technical Presentation Outline:

1. Principles of Air-Conditioning
2. Safety Handling of Refrigerants
3. Live Repair and Trouble Shooting of Air-Conditioning Unit
4. Preventive Maintenance of Air-Conditioning Unit

Guest Speaker:
Engr. Crisostomo C. Ortiz, P.M.E., ASEAN Eng.
Past President, 2014
PSME-WRSA Jeddah Chapter

THEME: "Building Robust and Resilient PSME-WRSA JC in Response to Extreme Global Challenge."

Our 2nd Technical Webinar was held in Crave Obhur, Jeddah, Kingdom of Saudi Arabia last August 20, 2021 entitled "REFRIGERATION AND AIR CONDITIONING WORKSHOP" thru HYBRID PLATFORM, where attendees were simultaneously present in physical and thru video conferencing. Twelve (12) attended physically while forty four (44) attended virtually via zoom.



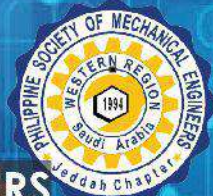
PPO-WRSA COMMUNITY SERVICE AND TEAM BUILDING



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On Sept 24 & Oct.1, 2021, PSME-WRSA JC had its two (2) batches of Plant Tours to SADAFCO Ice Cream Factory in Jeddah Industrial-1. The program was led by Plant Tours Director Engr. Orlan C. Moriones. We were welcomed with an Inspirational message from PP Wilfredo R. Ruiz. The Plant Processes were presented by SADAFCO Engineers, Roy M. Tumamak and Antonio Elmer L. Quintilla, and followed immediately with the tour inside their plant.

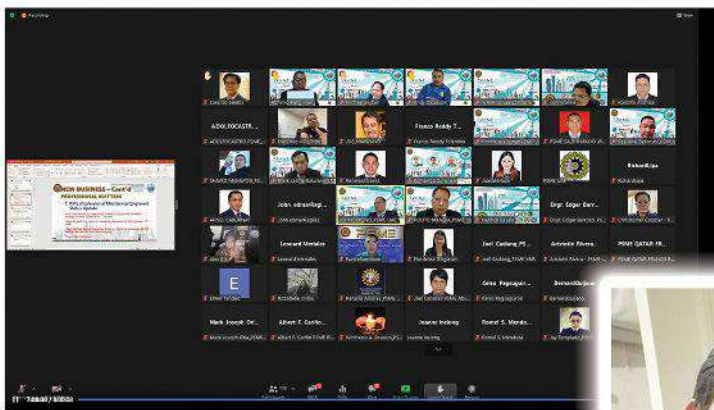




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Website: www.psme-wrsa.com
"MOST OUTSTANDING CHAPTER YEARS 2005, 2006, 2007, 2011, 2012 and 2013"

"General Membership Meeting and Election of 2022 Board of Directors"

Friday 12 NOV. 2021
1:00 PM - 4:00 PM (KSA Time)
6:00 PM - 9:00 PM (Phil. Time)

VIA ZOOM
FOR MORE INFO PLEASE CALL
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"Building Robust and Resilient PSME-WRSA JC in Response to Extreme Global Challenge"

STOCK TRADER vs. STOCK INVESTOR

STOCK TRADER	STOCK INVESTOR
Stock traders are short-term investors. Day traders (buy and sell stocks multiple times in a day), or, swing traders (hold positions for weeks or months looking for opportunities).	Stock investors are long-term investors also known as buy-and-hold investors. Some will only buy and/or sell stocks monthly, quarterly, or even annually.
Day traders and swing traders use technical analysis to find stocks to buy and sell. Rely on indicators, such as support and resistance, RSI, moving averages, Bollinger band, Fib., etc.	Stock investors relies on fundamental analysis . Rely more on the strength of companies' business models and on financial reports.
Attempts to manage their risk by limiting the potential loss per trade (stop loss order).	Manages their risk through diversification and cost averaging .
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To be a completely passive investor, invest in **mutual funds** instead of individual stocks and avoid the hassle of finding the stocks to buy. It allows you to invest in stocks without doing any work.

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Engineering Council

The Engineering Council is the UK regulatory body for the engineering profession. We hold the national register of over 250,000 Engineering Technicians (Eng Tech), Incorporated Engineers (Ing), Chartered Engineers (CEng), and Information and Communications Technology Technicians (ICT Tech).

There are five generic areas of competence and commitment for all registrants, which broadly cover:

- 1 - Knowledge and understanding
- 2 - Design, development and solving engineering problems
- 3 - Responsibility, management and leadership
- 4 - Communication and professional skills
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The UK Standards for Professional Engineering Competence (UK-SPICE) sets out the competence and commitment required for registration as an Engineering Technician (EngTech), Incorporated Engineer (Ing) or Chartered Engineer (CEng). It also includes examples of activities that demonstrate the required competence and commitment.

PSME-WRSA TECH WEBINAR Nov 12, 2021



"18TH ANNUAL CONFERENCE"



ELECTION OF 2022 EXECUTIVE OFFICERS & DIRECTORS



PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."

Introduction

What is a Clean Agent?

Electrically non conducting, volatile or gaseous fire extinguishing that does not leave a residue upon evaporation.

Advantages of Clean Agent Gas Suppression System over Water based Fire System:

- The Clean Agent Gas Suppression System offer the best solution for fighting electrical type of fire.
- They produce no damage to the electronics as all the clean agents chemically non-reactive and leave no residue.
- It is total flooding system means an agent should be discharged for concentration throughout a hazard volume.

Benefits of Clean Agent Suppression System:

- 1.0 Fast Extinguishing
- 2.0 Minimal Clean up
- 3.0 Safe for Human
- 4.0 Highly effective and Eco-friendly

Clean Agent Types

Table 1.4.1.2 Agents Addressed in NFPA 2001

Agent Designation	Chemical Name	Chemistry
FK-5-1-12	Dodecafluoro-2-methylpentan-3-one	$\text{CF}_3\text{CF}_2\text{C}(\text{O})\text{CF}(\text{CF}_3)_2$
HFC Blend A	Dichlorotrifluoroethane HCFC-123 (4.75%)	CHCl_2CF_3
	Chlorodifluoromethane HCFC-22 (82%)	CHClF_2
	Chlorotetrafluoroethane HCFC-124 (9.5%)	CHClCF_3
	Isopropenyl-1-methylcyclohexene (3.75%)	
HCFC-124	Chlorotetrafluoroethane	CHClCF_3
HFC-125	Pentafluoroethane	CHF_2CF_3
HFC-227ea	Heptafluoropropane	$\text{CF}_3\text{CH}_2\text{CF}_3$
HFC-23	Trifluoromethane	CHF_3
HFC-236fa	Hexafluoropropane	$\text{CF}_3\text{CH}_2\text{CF}_3$
FIG-131i	Trifluoroiodide	CF_3I
IG-01	Argon	Ar
IG-100	Nitrogen	N_2
IG-541	Nitrogen (52%)	N_2
	Argon (40%)	Ar
	Carbon dioxide (8%)	CO_2
IG-55	Nitrogen (50%)	N_2
	Argon (50%)	Ar
HFC Blend B	Tetrafluoroethane (86%)	CH_2FCF_3
	Pentafluoroethane (9%)	CHF_2CF_3
	Carbon dioxide (5%)	CO_2

HFC 227ea (FM 200), HFC 125(NAF S 125), FK 5-112 (NOVEC 1230) reduce the heat from the system such extent that fire put out. They also have chain reaction inhibition properties that help faster extinguishment.

Recommended Use:

- Computer Server Room.
- Telecommunication Control Room.
- Power Plant Control Room.
- Archives.
- Sensitive Electrical Equipment Storage Room.
- Water Sensitive Storage Facilities.



NOVEC 1230 Gas Suppression System

NFPA Standard used as a reference in Designing and Installation of Clean Agent Gas Suppression System:

- NFPA 2001: Standard on Clean Agent Fire Extinguishing System
- NFPA 72: National Fire Alarm and Signaling Code
- NFPA 101: Fire Safety Code

How Clean Agent Suppression System Works:

A Clean Agent Fire Suppression System consist of Three (3) subsystem such as a Detection System, Pipe Network (for Distribution), Storage (Agent Cylinders) and Release system. A Detection System detects fire via detectors (Smoke, Heat and Aspiration detectors). After detection of fire, it sends a signal to the Extinguishing Control Panel. It then activates audio-visual alarms through sounder and strobe to alert people on the area to vacate. It also sends another signal to actuate the attached solenoid valve actuator in the agent cylinder. Gas is released and flowed through pipes, nozzles and extinguishing the fire.

Design and Installation Summary:

NOVEC 1230 Gas Suppression System:

Note:

- A recommendation is needed to select a manufacturer before starting the design. Every brand manufactures NOVEC 1230 Clean Agent Fire Suppression System provides a system manual.
- Need to study thoroughly the Material Safety Datasheet (MSDS) to understand the effect of the agent on human.
- NFPA 2001 Standard on Clean Agent Fire Extinguishing Systems should be provided to help standardized the design.
- If any specific instructions are provided Authority Having Jurisdiction (AHJ).

1.0 Study on Hazard

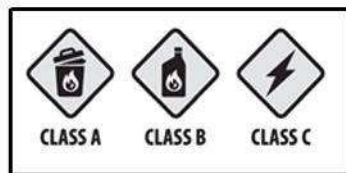
Hazard is defined within the limitations established by NFPA 2001, UL, FM or other third parties approval. The following properties should be checked during analyzing a hazard:

- Minimum and maximum temperature can develop during normal operation in the protected area.
- Ambient temperature
- Hazard class
- The integrity of the enclosure

2.0 Determining Hazard Class

National Fire Protection Association (NFPA) classifies fire based on the combustible material that can possibly catch fire. There are Five (5) classes of fire (Class A,B,C,D & K). NOVEC 1230 Clean Agent Fire Suppression System is only recommended to use Class A, B & C.

As a designer, it must be known the Hazard Class to make an informed decision about selecting a percentage of design concentration agent quantity.



Fire Class Symbol

Class A:
Everyday use solid items such as paper, wood, fabrics, rubber, cloth

Class B:
Flammable liquid or gas such as Diesel, Natural Gas

Class C:
Any type of Electrical Fire

3.0 Knowing the Enclosure

Enclosure has major effects on the design of NOVEC 1230 Clean Agent Fire Suppression System. If ambient pressure vary more than 11 percent from standard sea level pressures, the design quantity of NOVEC 1230 needs to be adjusted. A minimum concentration of 85 percent of the adjusted minimum design concentration shall be held at the highest height of protected content within the hazard for a period of 10 minutes or for a time period sufficient to allow for response by trained personnel. If there are any enclosable openings in the protected enclosure than it should be kept to a minimum. It is better to ensure all openings are capable of being closed at the time of agent discharge.

4.0 Determining Agent Quantity for NOVEC 1230

Two (2) formulas to find out the minimum required amount of NOVEC 1230 Clean Agent.

FORMULA 1:

$$W = V * C.F. * F.F.$$

Where:

W = Weight of Agent

V = Volume of the protected enclosure

F.F. = Flooding Factor

C.F. = Atmospheric Correction Factor

FORMULA 2:

$$W = C.F. \left(\frac{V}{s} \left(\frac{C}{100 - C} \right) \right)$$

Where:

W = Weight of Agent

V = Volume of the protected enclosure

C.F. = Atmospheric Correction Factor

S = specific volume of superheated NOVEC 1230 fluid vapor

$$= 0.0664 + 0.0002741 * t$$

t = design temperature in the hazard area

C = Concentration of Agent required

Note:

This calculation includes an allowance for the normal leakage from a "tight" enclosure due to agent expansion.

Determining the Hazard Volume (V)

$$V = L * W * H$$

Where:

V = Volume of the room (Hazard)

L = Length of the room (Hazard)

W = Width of the room (Hazard)

H = Height of the room (Hazard)

Note:

Need to deduct the volume of solid non-permeable and non-removable objects, permanent structures or equipment in the Hazard room to the computed Hazard Volume of the room. This product is the actual protected Hazard Volume. Selecting Concentrate Percentage (C) for NOVEC 1230

Flammable Liquid	Design Concentration % v/v	Flammable Liquid	Design Concentration % v/v
1-Butane	6.37	Isocetane	6.11
1-Propanol	7.02	Isopropanol Alcohol	6.37
2,2,4-trimethylpentane	6.11	Methane	7.28
2-butoxyethanol	6.76	Methanol	8.45
Acetone	5.59	Methyl Ethyl Ketone	5.85
Acetonitrile	4.20	Methyl Isobutyl Ketone	5.72
Commercial Heptane	5.72	Methyl Tert Butyl Ether	5.95
Commercial Hexanes	5.59	n-Heptane	5.85
Cyclohexane	5.85	n-Heptane	6.11
Cyclopentanone	5.98	Octane	5.72
Denatured Alcohol (92.2% EtOH, 4.6% IPA, and 3.1% MeOH)	6.89	Propane	7.54
Diesel Fuel	4.42	Pyrrolidine	6.11
Diethyl Ether	6.37	Technical Heptane	5.59
Ethanol	7.15	Tetrahydrofuran	6.50
Ethyl Acetate	6.11	Toluene	4.55
Gasoline - 87 oct. unleaded	5.85	Transformer Oil	5.85
Hexene	5.98	Class A & de-energized Class C Fires	4.20

*Note: Design Concentration for Class B Fire are shown in the above table and includes a 30% safety factor from the minimum extinguishing concentration.

Minimum design concentrations for Novec 1230 on Class A & B hazards

Table for NOVEC 1230 Flooding Factor (F.F) – Metric Unit

Temp (t) (°C)	Specific Vapor Volume (s) (m³/kg)	Weight Requirements of Hazard Volume, W/V (kg/m³)							
		Design Concentration (% by Volume)							
		3	4	5	6	7	8	9	10
0	0.0664000	0.4658	0.6275	0.7926	0.9613	1.1336	1.3096	1.4895	1.6734
5	0.0677715	0.4564	0.6148	0.7766	0.9418	1.1106	1.2831	1.4593	1.6395
10	0.0691430	0.4473	0.6026	0.7612	0.9232	1.0886	1.2576	1.4304	1.6070
15	0.0705145	0.4386	0.5909	0.7464	0.9052	1.0674	1.2332	1.4026	1.5757
20	0.0718860	0.4302	0.5796	0.7322	0.8879	1.0471	1.2096	1.3758	1.5457
25	0.0732575	0.4222	0.5688	0.7184	0.8713	1.0275	1.1870	1.3500	1.5176
30	0.0746290	0.4144	0.5583	0.7052	0.8553	1.0086	1.1652	1.3252	1.4888
35	0.0760005	0.4069	0.5482	0.6925	0.8399	0.9904	1.1442	1.3013	1.4620
40	0.0773720	0.3997	0.5385	0.6802	0.8250	0.9728	1.1239	1.2783	1.4361
45	0.0787435	0.3928	0.5291	0.6684	0.8106	0.9559	1.1043	1.2560	1.4111
50	0.0801150	0.3860	0.5201	0.6570	0.7967	0.9395	1.0854	1.2345	1.3869
55	0.0814865	0.3795	0.5113	0.6459	0.7833	0.9237	1.0671	1.2137	1.3636

NOVEC 1230 Flooding Factor (F.F) Table

Where:

• W/V (agent weight requirement (kg/m³) = pounds of agent required per m³ of protected volume needed to produce the indicated concentration at the temperature specified.

• t (temperature (C)) = the design temperature in the hazard area.

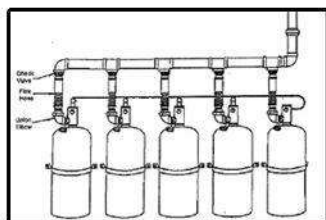
• s (specific volume (m³/kg)) = specific volume of superheated NOVEC 1230 vapor as approximated by formula: $s = 0.1269 + 0.5005(1)$, where t is in C

• C (Concentration (%)) = volumetric concentration of NOVEC 1230 in air at the temperature indicated.

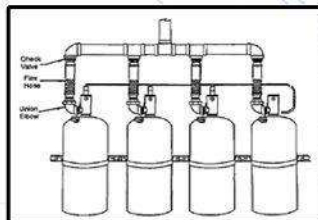
Using NOVEC 1230 Atmospheric Correction Factor (C.F.)

Altitude		Enclosure Pressure		Correction Factor (CF)
ft.	km	psia	mm Hg	
-3,000	-0.92	16.25	840	1.11
-2,000	-0.61	15.71	812	1.07
-1,000	-0.30	15.23	787	1.04
0	0.00	14.70	760	1.00
1,000	0.30	14.18	733	0.96
2,000	0.61	13.64	705	0.93
3,000	0.91	13.12	678	0.89
4,000	1.22	12.58	650	0.86
5,000	1.52	12.04	622	0.82
6,000	1.83	11.53	596	0.78
7,000	2.13	11.03	570	0.75
8,000	2.45	10.64	550	0.72
9,000	2.74	10.22	528	0.69
10,000	3.05	9.77	505	0.66

5.0 NOVEC 1230 Selection & Positioning



NOVEC 1230: Typical End Outlet Manifold



NOVEC 1230: Typical Center Outlet Manifold

The cylinder containing NOVEC 1230 is selected based on the required quantity found from calculation. Often time, required quantity does not match with the manufacturer's standard model. In this case, have to select the nearest big size cylinder available. Need more than one cylinder to protect the occupancy and they supply to the same manifold outlet for distribution, then all cylinders should be of the same size and pressure.

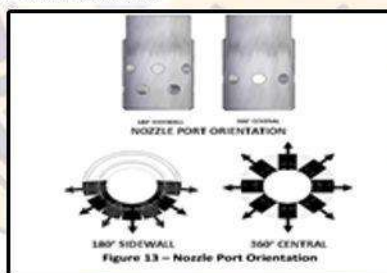
Mounting NOVEC 1230 is important. It helps to retain the weight of the storage container and balance the reaction force in the event of a discharge. The position of the cylinder in a safe, accessible, far from high traffic area and convenient location though it needs a minimum agent travel during a discharge.

6.0 Selecting the nozzle for NOVEC 1230

They are Two (2) types:

1.0 360° Nozzle: This type provides a full 360° discharge pattern designed for placement in the center of the hazard.

2.0 180° Nozzle: This provides a 180° discharge pattern designed for placement adjacent to a sidewall of the hazard.



Nozzle Type

7.0 Nozzle positioning for NOVEC 1230

• Nozzles shall be placed within protected enclosure in compliance with listed limitations with regards to spacing, floor coverage and alignment. Generally, can get all this information from the manufacturer installation manual. It should mind that the maximum volume varies as a function of minimum design concentration and minimum temperature.

• A sufficient number of nozzles shall be used to Cover the entire hazard area on the basis of the unit areas protected by each nozzle. But nozzle have their own limitations stated in nozzle listings

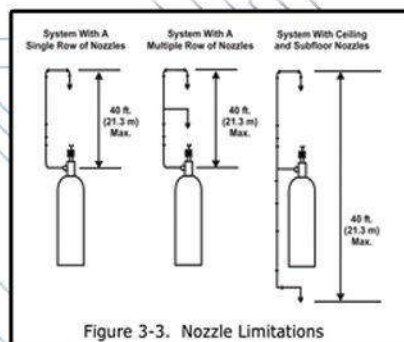


Figure 3-3. Nozzle Limitations

8.0 Pipe network planning for NOVEC 1230

Most of the cases, manufacturers use specialized flow calculation software for pipe network planning. But in designing a system without software can be done, as long as to follow nozzle selection, pipe size and pipe length limitations provided by manufacturer. Use the table as an estimation guide for the sizing of distribution piping.

Note: It is recommended to use the Flow Calculation Software before finalizing the design.

Pipe Size Nominal	Schedule 40 Pipe				Schedule 80 Pipe			
	Minimum Flow Rate for All Sections Leading to a Tee		60% of Flow Rates for All Sections Ending With a Nozzle		Minimum Flow Rate for All Sections Leading to a Tee		60% of Flow Rates for All Sections Ending With a Nozzle	
	lb./sec.	kg./sec.	lb./sec.	kg./sec.	lb./sec.	kg./sec.	lb./sec.	kg./sec.
1/4 in. (9 mm)	0.68	0.31	0.41	0.19	0.30	0.14	0.18	0.08
3/8 in. (10 mm)	1.55	0.70	0.93	0.42	1.06	0.48	0.64	0.29
1/2 in. (15 mm)	2.58	1.17	1.55	0.70	1.95	0.88	1.17	0.53
3/4 in. (20 mm)	4.53	2.05	2.72	1.23	3.68	1.67	2.21	1.00
1 in. (25 mm)	7.29	3.31	4.37	1.98	6.08	2.76	3.65	1.65
1 1/4 in. (32 mm)	12.67	5.75	7.60	3.45	10.83	4.91	6.50	2.95
1 1/2 in. (40 mm)	17.46	7.92	10.48	4.75	15.06	6.83	9.04	4.10
2 in. (50 mm)	29.82	13.53	17.89	8.12	25.96	11.78	15.58	7.07
2 1/2 in. (65 mm)	44.06	19.99	26.44	11.99	38.51	17.47	23.11	10.48
3 in. (80 mm)	71.34	32.36	42.80	19.42	62.96	28.56	37.78	17.13
3 1/2 in. (90 mm)	98.32	44.60	58.99	26.76	87.46	39.67	52.48	23.80
4 in. (100 mm)	129.28	58.64	77.57	35.18	115.87	52.56	69.52	31.53
5 in. (125 mm)	205.71	93.31	123.43	55.99	187.31	84.96	112.39	50.98
6 in. (150 mm)	286.54	129.97	171.92	77.98	262.77	119.19	157.66	71.51

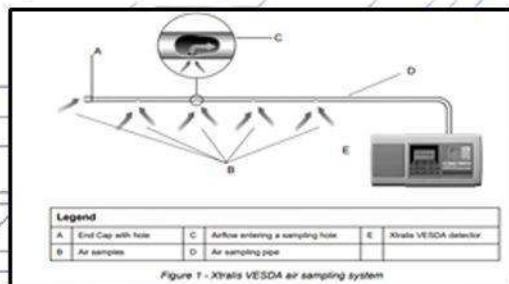
9.0 Selection of detectors for NOVEC 1230 Gas Suppression System Types of Smoke Detectors:

1.0 Spot Type Photoelectric Smoke Detector

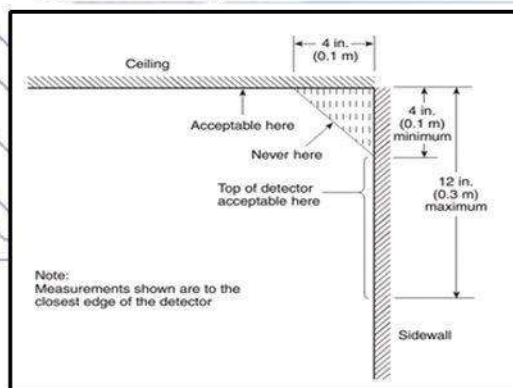
The Photoelectric Smoke Detector provides a superior response to low energy (smoldering) fires since they respond to optical density of smoke and such fires produce a bulk amount of visible size range smoke particles.



2.0 Air Sampling – Type Smoke Detector Air sampling type smoke detectors draw in air from the protected space and analyze it for smoke particles. In fact the air is mechanically transported to the sensor permits the use of filters to remove most dust particle, a common source of false alarms for ordinary non aspirating smoke detectors.



10.0 Positioning of detectors for NOVEC 1230 Gas Suppression System



Mounting of Spot Type Detectors

Need to recommend to follow NFPA 72 and manufacturer product listing to design detectors. Photoelectric smoke detectors are usually installed in the ceiling. Detectors should not install in an air stream from a HVAC supply grill, it will inhibit smoke from a fire in protected space from reaching the detector.

11.0 Positioning of Audio Visual Alarm Devices for NOVEC 1230

• Selecting, positioning and installing of audiovisual alarm devices should be done by following NFPA 72.

• Audible notification appliances are the most common. Their location, decibel setting, frequency and length of the signal are calculated according to numerous factors. (i.e the physical parameters of the area protected)

• Visible notification appliances usually supplement the audible alarm system but in certain cases (such as loud ambient noise) they may be the primary alarm system. As with audible systems, the design of visual notification appliances must use many calculations based on a variety of factors, including the physical properties of light.

12.0 Integrity Test for NOVEC 1230 Gas Suppression System

• Integrity Test predicts how long fire suppressant agents take to descend to a given level in the room without having to release the agent itself.

• Purpose of Integrity Test:

When you have a gaseous suppression system installed, your protected area will need testing ensure that the suppressant is maintained within the area and will work in case of fire. It is a requirement of most insurance policies and British Standards that suppression system is tested at least annually.

• An Integrity retest is also required if any modifications are made in the area. So moving a partition, fitting a new door, installing new cables or pipes or in any way modifying the structural perimeter of an enclosure will almost effect gaseous fire suppression retention. Any changes to the room (no matter how small or inconsequential they may seem) will require a retest carried out.

Note:

There some additional things to incorporate into our design, mostly in Detection System such doors, air-handling equipment, damper etc. These mechanical items need to close immediately after detecting a fire.

Thank you!

REFERENCES:

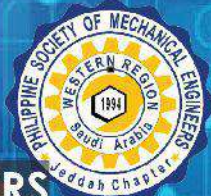
1. Data Center Project
2. www.firetec-ss.com
3. Fire Protection GURU (NFPA 2001, NFPA 72, NFPA 101)



Napoleon M. Castañeda, RMEE, RMP
2021 Technical Affairs Director
PSME-WRSA Jeddah Chapter



TECHNICAL WRITE-UPS CONCENTRATED SOLAR POWER (CSP) USING MOLTEN SALT TECHNOLOGY



Introduction

Two phenomena nowadays jeopardize people's comfort and way of living: global warming and the fossil fuel resources depletion. Those two events are linked together and trigger, as the main consequence for humans, a need to change their way of consuming, most of all energy, without changing their comfort. More and more countries and organizations turn thus themselves to renewable and greener energies.

Almost all the renewable energies that are known today (except for geothermal energy) come from the Sun. Indeed, when reaching the Earth, the sunrays bring four different forms of energy. Latent energy is used to vaporize the water from the sea, which is then transformed into rain and is used in hydropower. Sensible heat is used to heat up fluids, in thermal solar energy as well as in ocean thermal energy. The uneven heating of the Earth creates winds whose kinetic energy is used to run wind turbines and oscillating water columns using waves energy. Finally, the energy of photons is used in photovoltaic cells, but also by the plants during the photosynthesis, thus creating biomass.

Of all those renewable energies, hydropower is the most advanced one, developed to full power in most of the developed countries, and still developing in developing countries. Wind power and photovoltaic are developing quickly, even though they suffer from their unpredictability and variability, which make them difficult to link to the electrical network. Biomass is used in power plants, in complement or not to fossil fuel, but can also be turned directly into fuel for car engines. Ocean thermal energy and waves energy are still at an early stage in the development process as there is a need to find solutions to withstand complex situations as sea storms and icing.

Among all of these renewable energies, concentrated solar power (CSP) is a fast developing technology with great potential. The amount of solar energy striking the Earth every day (600 TW) is about ten times larger than the daily global electricity consumption (Krothapalli 2011). A mirror of about 20 square meters in the desert would be enough to provide the need of one person, day and night, with no CO₂ emission [<http://www.desertec.org>]. The potential is thus huge. And the technology to convert the heat into electricity is a proven and well-known one that has been used for years in thermal power plants: Rankine cycles with a steam turbine.

Another great advantage of CSP is the possibility of thermal energy storage that is offered by the technology, with steam accumulators or molten salts tanks for example. The storage of thermal energy is much more efficient and easily implemented than electricity storage in batteries. This storage possibility is thus impossible on the developing technologies that are wind power and photovoltaic.

With energy storage, producing a constant power with a renewable energy becomes possible. Indeed, buffer storage allows smoothing the production, even when clouds pass above the thermal solar plant. Storage allows also producing power even when there is no sun anymore. It would then be possible, with adapted storage technologies, to produce at constant rate, even during the night, to meet the demand. This makes thus concentrated solar power much easier to link to the electrical network, as it does not bring instabilities, contrary to the intermittent and variable technologies that are wind power and photovoltaic.

Four different concentrator technologies are currently developed to convert the radiation into useful energy for a steam turbine. Parabolic trough and linear Fresnel technologies use mirrors approximating a parabolic reflection onto a tube placed in the focal point of the mirrors. Solar tower power plants use a field of heliostats (or planar mirrors) to concentrate the sunrays onto a receiver atop a tower. Finally, parabolic dish technology is the only modular technology, using a parabolic dish that reflects the light on a receiver placed in the middle of the reflector.

After estimating the amount of energy that can be received on the solar receiver of a CSP plant, all the technologies of collecting and concentrating the energy will be presented, as well as the technologies to convert the energy into electricity and to store thermal energy. Then, the designer into which this design is led will be presented, as well as the projects onto which the design is based.

Background of the Study

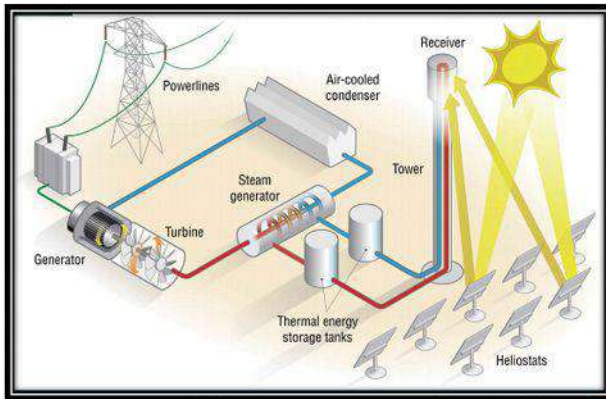
CSP technologies can be used to generate electricity by converting energy from sunlight to power a turbine, but it can also be used as heat in a variety of industrial applications, like water desalination, enhanced oil recovery, food processing, chemical production, and mineral processing.

CSP systems can supply solar power on-demand through the use of thermal storage, helping to address grid integration challenges related to the variability of solar energy and enabling solar-generated heat to be stored until electricity is needed, even after the sun sets.

How Molten Salt Solar Power Works

In tower CSP, a molten salt mix, like sodium nitrate and potassium nitrate, is heated by reflecting sunlight with mirrors onto a receiver atop a central tower that is encircled by a solar field of flat mirrors (heliostats).

This molten salt is cycled up the tower “cold” at 260°C and is then heated by the focused sunlight aimed at the receiver from the encircling solar field. Once heated, this now 565°C molten salt flows down the tower where it can either be used right away in the power block to generate electricity or be stored thermally in the hot tank for use later.



Molten Salt Concentrated Power Flow
(Source, arpa-e.energy.gov, 2020)

How the energy storage is use?

All concentrating solar power (CSP) technologies use a mirror configuration to concentrate the sun's light energy onto a receiver and convert it into heat. The heat can then be used to create steam to drive a turbine to produce electrical power or used as industrial process heat.

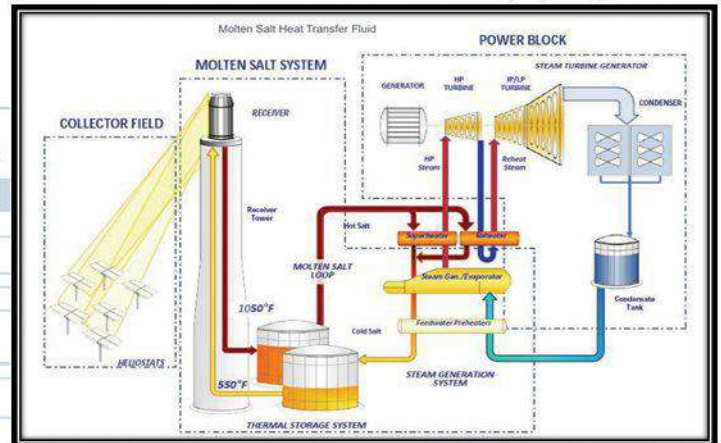
Concentrating solar power plants can integrate thermal energy storage systems to use to generate electricity during cloudy periods or for hours after sunset or before sunrise. This ability to store solar energy makes concentrating solar power a flexible and dispatchable source of renewable energy.

CSP systems can be also combined with combined cycle power plants resulting in hybrid power plants which provide high-value, dispatchable power. They can also be integrated into existing thermal-fired power plants that use a power block like CSP; such as coal, natural gas, bio fuel or geothermal plants. CSP plants can also use fossil fuel to supplement the solar output during periods of low solar radiation. In that case, a natural gas-fired heat or a gas steam boiler/reheater is used.

In both CSP technologies – power tower and parabolic trough – when the thermal energy in the molten salt or the Heat Transfer Fluid (HTF) is ready to be used, it is sent to a heat exchanger. There its heat is extracted and used to boil water to make steam to run a steam turbine in a power block, like the earlier power plants that use up a fuel, like natural gas, coal, or nuclear. Like the older thermal plants, CSP generates electricity by rotating giant machinery.

With its heat extracted, the now “cooler” molten salt is stored in a second tank ready to be sent up the tower to be heated again by the sunlight reflected onto the receiver. Similarly, in trough CSP, the hot oil, once its heat has been extracted, is sent back out into the solar field to retrieve the next round of heat and to bring it back to the power block to be used again.

Solar Reserve



Power Demand

Energy is one of the most important parts of the industrial progress of the world. The world rapidly progressed when electrical energy was introduced. This energy is produced from natural resources, both renewable and non-renewable source. The problem is we vastly rely on the non-renewable source. According to the Renewable Global Status Report (GSR) from REN21, roughly a fifth of the world's electrical power production now comes from renewable sources. To be more precise, in 2013 renewable energy accounted for 22% of the global energy mix, up from 21% in 2012 and 18% in 2007. Energy depletion is one of the main problems that the whole world is facing. This has effect on economies, health, and natural biodiversity of any country. Depletion of energy resources is a problem along the increasing demand in power as technologies. The solution to this problem is we need to find ways to rely on renewable sources of energy. The world has so much potential for different kind of resource. We need to utilize these resources for us to progress without depending on finite number of sources.

REFERENCES:

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2. H. Müller-Steinhagen, and F. Trieb, "Concentrating Solar Power: A Review of the Technology"
3. Zhang, J. Baeyens, J. Degreve and G. Caceres, "Concentrated solar power plants: Review and design methodology," Renewable and Sustainable Energy Reviews



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2021 Plant Tours Director

1. INTRODUCTION

Burst testing is a critical process in aircon manufacturing; here, the coil is charge at a certain dry air pressure to test if it will fail. Hence, it is called "burst" test, i.e. to break or cause to break open or apart suddenly and noisily, especially from internal pressure; explode. For the R-22 refrigerant which has a discharge pressure of 220 psig, the burst test pressure requirement is 350 psig. With the arrival of R410A refrigerant which has a discharge pressure of 400 psig, the requirement was increased to 650 psig.

Our existing compressors has an operating pressure of 500 psig, with an average of 12 operating hours per day, increasing the cut-off pressure to 650 psig or more, will increase also the hours and expedite the wear and tear of parts resulting to increase in maintenance cost.

Benchmarking from Mexico factory, we found that they are using a Booster to increase the pressure from 450 psig to 650 psig. It is an Air Amplifier made by Haskel. Hence, it was decided to apply the same for our Jeddah Factory.

2. EXISTING DATA

HIGH PRESSURE RECIPROCATING COMPRESSORS

Description:

Ingersoll Rand Model 15T2 compressors is intended to supply air pressure from 300 psig to 1000 psig. The actual air delivery covers a range from 4.8 cfm to 40.0 cfm

Model: 15T2

No. of units: 10

Working pressure: 450 psig

Flow rate per unit: 40 cfm

Average hours per compressor: 10

No. of units in operation per shift: 7

Total Flow rate: 280 cfm



3. REQUIREMENTS AND CALCULATION:

Volume of the largest coil to be tested: 15.39 cu.ft.

Time required for charging: 20 sec.

Calculating the flow rate: $15.39 \text{ cu.ft.} / 20 \text{ secs.} = 0.7695 \text{ cu.ft./sec.} = 46.17 \text{ cfm}$

Reqd. pressure: 650 psig

4. HASKEL AIR AMPLIFIER

The Haskel amplifier is a double acting pump. It provides a means of boosting plant air to higher pressure and relatively low flow requirements. The ratio of the air drive piston vs. the pump air piston is 4:1.

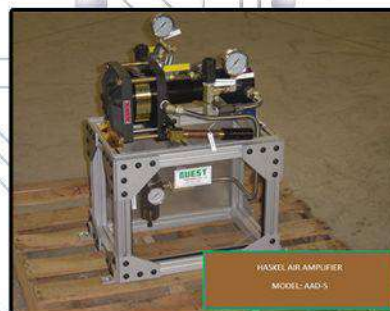
Haskel Air Amplifier Booster:

Model: AAD-5

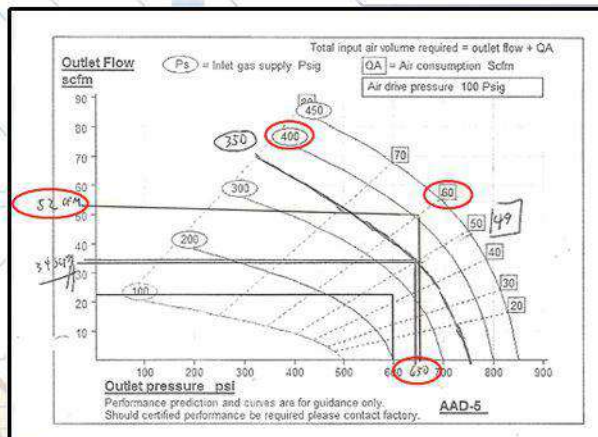
Maximum air drive pressure: 150 psig

Maximum inlet pressure: 1250 psig

Maximum outlet pressure: 1250 psig



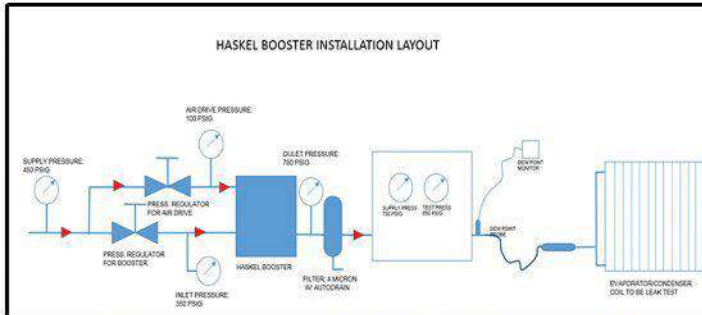
5. MANUFACTURER'S PERFORMANCE DATA



From the performance data, the required pressure of 650 psig is plotted on the x-axis; simultaneously the required input pressure of 400 psig for the amplifier is plotted along the curve. The intersection which is then plotted on the y-axis gives an output flow rate of 52 cfm which is more than the required flow of 46.17 cfm. With the same intersection plotted on the other side of y-axis; the value for the input flow rate of the amplifier is given at 60 cfm which is enough for the IR compressors considering the total flow rate is 280 cfm.

Judging from the plotted chart, the amplifier can accommodate the pressure and flow rate requirements based on calculations.

6. INSTALLATION LAYOUT



7. UNITS INSTALLED

7.1 CP Assy Line 3 Date Installed: Dec 2017



7.2 CP Assy Line 2 Date Installed: Jan. 2018



8. CONCLUSION:

Using the amplifier at the point of use offers a more economical and safe choice of increasing the pressure at low volume. It is economical because the cost of an amplifier is USD 1,918.00 compared to the cost of a reciprocating compressor which is USD 15,000.00. It is more safer because there is no possibility of pipe failure in the line as compared to increasing the pressure of the IR compressor that adds stress to the pipes. The importance of using a performance chart is being highlighted because plotting the values allow us to forecast if the pressure and flow will meet the desired parameters, it is not stone-cut but at least we have a solid benchmark when conducting trials. Benchmarking is another key especially when encountering new process, it is an information-sharing undertaking that we engineers could rely on from our colleagues in other facilities.

REFERENCE:

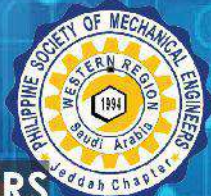
Haskel Operating & Maintenance Manual for Model 58057 by Haskel Int'l Inc.



Niño Jose A. Lopez, RMEE
2021 VP for Internal Affairs



THROUGH THE YEARS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

The Philippine Society of Mechanical Engineers - Western Region Saudi Arabia Jeddah Chapter (PSME-WRSA JC) was started and headed by Nildo K. Tan, Jr., PME, a member of the Philippine Society of Mechanical Engineers Saudi Arabia Chapter (PSME-SA) in Dammam, during his assignment in Jeddah. He was tasked to form the PSME-WRSA JC in Jeddah being the Director of Autonomous Provincial Unit (APU). The objective was to promote excellence in the practice of mechanical engineering profession among the Filipino mechanical engineers in the Western Region of Saudi Arabia, and to provide a venue for enhancing professional competence, brotherhood, interaction and camaraderie among its members.

REMINISCENCES THROUGH THE YEARS

1993

- Initially, only a handful of mechanical engineers coming from various companies and business establishments in Jeddah showed interest to join.
- 30 Registered Mechanical Engineers was the basic requirement by the PSME National to become an independent chapter.

1994

- The required 30 Registered Mechanical Engineers was attained and the application to become an independent chapter was formally endorsed by PSME-SA Chapter to the PSME National.
- Subsequently, Nildo K. Tan, Jr., PME was elected as the first Chapter President.

1995

- The term of Engr. Ruben Parpan has formally received the charter approval of PSME-WRSA Jeddah Chapter from PSME National as an independent chapter.
- Nildo K. Tan, Jr., PME was automatically named as the Charter President.

1996 and 1997

- During the presidency of Engr. Rene Y. Logarta and Engr. Rene C. Bernales, PME, respectively, PSME-WRSA JC formulated its constitution and by-laws identifying areas of responsibilities, social awareness campaigns, plant visits, technical seminars, membership growth, and sports activities.
- The first PSME-WRSA JC sports fest was sponsored by Advance Petroleum Services Limited-Gulf Oil courtesy of Charter Pres. Nildo K. Tan, Jr., PME

1998

- Pres. Danilo V. Gercio, PME and the BOD conceived the idea of board exams here in Jeddah for non-registered mechanical engineers and plant mechanics.
- Documentation and communications with the PSME National Office and the Professional Regulation Commission (PRC) was initiated.
- Rizalino Nobleza, PME spearheaded the first M.E. Board Exam review at IPSJ, Jeddah.
- The birth of PSME-WRSA JC's newsletter, "Jeddah Prime Movers" was successfully launch with this first issue. Thanks to the efforts of Ruben B. Serrano, PME, and Dionisio A. Lora Jr., PME together with the contribution from all members.
- A Presidential Award was given to PSME-WRSA JC from PSME National during the 46th annual convention in Cebu, Philippines on October 22, 1998.

1999

- The term of Filemon E. Agulo, PME, was considered a year of fulfillment. Plans and preparations of his predecessors became a reality.
- The first Professional Mechanical Engineer (PME) board examination was took place in November 20, 1999. PRC representatives together with BME members came to Jeddah and conducted the examination. Some associate members took the Mechanical Engineers board exam in Dammam.
- Another Presidential Award was given to PSME-WRSA JC from PSME National during the 47th Annual National Convention on October 22, 1999.

2000

- The millennium president Wilfredo R. Ruiz, PME made substantial achievements.
- The Professional Regulation Commission (PRC) conducted the 1st Mechanical Engineers board exam and the 2nd Professional Mechanical Engineers board exam in Jeddah on July 2000.
- Pres. Willy was awarded Outstanding Chapter President.
- Felimon E. Agulo, PME was awarded as The Outstanding Mechanical Engineer (TOME), Consultancy category.
- Edwin M. Evasco, PME and Mohd. Pedro D. Entico, PME was awarded Most Outstanding Member and Most Outstanding Committee Chairman, respectively.
- PSME-WRSA JC got a Presidential Award at PSME National's 48th Annual Convention in Cebu, Philippines on October 20, 2000.



"18TH ANNUAL CONFERENCE"



THROUGH THE YEARS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

2001

- The presidency of Dionisio A. Lora, Jr., PME marked another milestone with notable achievements and projects.
- The 1st board exam for Certified Plant Mechanic (CPM) was conducted and the 2nd board exam for ME took place in Jeddah and Dammam.
- PSME-WRSA JC sponsored two deserving scholars who took 2-year vocational course.
- The formation of APU Riyadh for chartering was initiated.
- PSME-WRSA JC got a Presidential Award at PSME National's 49th Annual National Convention on October 19, 2001.

2002

- Pres. Juan U. Berbie, PME continued the implementation of the two students' scholarship from Region 11 and Region 4 under the supervision of DSWD.
- Formation and chartering of PSME-WRSA Toastmasters Club 6899 on March 5, 2002 by Toastmasters International, USA. Ricardo V. Romero, PME was the first elected Club President with 22 charter members.
- Recommendation was done to the PSME-National for the chartering of PSME-WRSA APU-Riyadh with more than 30 regular members.
- Napoleon M. Cepriaso, PME got The Outstanding Mechanical Engineer (TOME) award for Special Category in Environmental Engineering.
- PSME-WRSA Jeddah Chapter got the Most Outstanding Chapter for Membership Growth.
- Ricardo V. Romero, PME was awarded as the Most Outstanding Committee Chairman.
- PSME-WRSA Jeddah Chapter was presented Plaque of Recognition at PSME National's 50th Annual Convention in Manila on October 19, 2002.

2003

- Pres. Orlando L. Digma, PME faced many challenges in his term.
- The Autonomous Provincial Unit (APU) Riyadh was chartered by PSME National. The Induction of the Board of Directors was held in 28th February 2003 in Riyadh and IPP Juan U. Berbie, PME represented the PSME-WRSA Jeddah Chapter.
- The Chapter's first-ever scholar from Region 11 has successfully completed his studies in October 2003.
- Julius D. Caringal, PME and Wilfredo R Ruiz, PME were awarded as The Outstanding Mechanical Engineers (TOME) for Consultancy and Special Category in Automation and Controls, respectively, during the 51st PSME-National Annual Convention held in Manila.

2004

- The second term of Pres. Wilfredo R. Ruiz, PME, reminded us of how important camaraderie is, for the good and strengthening of any organization.
- Engr. Jose Emmanuel B. Acebuque was awarded The Most Outstanding Member at PSME National's 52nd Annual Convention in Manila.

2005

- Pres. Ernesto C. Cala, PME made momentous accomplishments.
- Ernesto C. Cala, PME was awarded as The Outstanding Mechanical Engineer (TOME) for Special Category in Automatic Energy Management and Controls System.
- PSME-WRSA Jeddah Chapter was awarded the Most Outstanding Chapter for the year 2005.
- PSME-WRSA JC was presented a Plaque of Recognition at PSME National's 53rd Annual National Convention on October 19, 2005.

2006

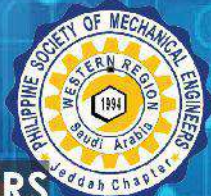
- The term of Pres. Willie C. Leoncio, PME was a dream come true for succeeding with their mentoring of Jeddah Electrical Engineers organization of their newly established Toastmasters club.
- PSME-WRSA Toastmasters Club successfully conducted the Youth Leadership Training joined with the International Philippine Schools of Jeddah.
- PSME-WRSA JC once again garnered the Most Outstanding Chapter Award and a Plaque of Recognition at the PSME National's 54th Annual Convention on October 24, 25 & 26, 2006

2007

- The presidency of Pres. Joselito A. Arellano, PME had been very fruitful.
- Pres. Joselito A. Arellano was awarded the Most Outstanding Chapter President.
- Engr. Rainier P. Patawi was awarded The Most Outstanding Member.
- PSME-WRSA JC got The Most Outstanding Chapter Award at PSME National's 55th Annual Convention.
- A mid-year thanksgiving party and fellowship was conducted to celebrate the fruitful and successful midyear activities of the Chapter.
- Continued board review for the ME and CPM examinees headed by the Professional Enhancement Director Julius D. Caringal, PME for the incoming SPLBE-SA of December 2007.



THROUGH THE YEARS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

2008

- Under the leadership of Pres. Froilan G. Miro, PME the chapter made notable achievements.
- Napoleon M. Cepriaso, PME conducted the Project Management seminar during the Midyear Convention. Followed by Wilfredo C. Leoncio, PME who conducted a seminar and product presentation on Daikin air conditioning technological advancement.
- Under the responsibility and commitment of Engr. Julius D. Caringal, PME, determined PME examinees passed the examination; Engr. Jose Emmanuel B. Acebuque, Engr. Ruben Alzate and Engr. Edilberto Cabodil. Oath-taking was held during the 9th PSME-WRSA JC's Annual Convention on November 28, 2008.

2009

- Pres. Julius D. Caringal, PME was determined to maintain the good performance of the chapter.
- Professional Enhancement Director Emmanuel B. Acebuque, PME headed the review preparation for the incoming SPLBE.
- Dionisio A. Lora, Jr., PME was awarded as TOME (The Outstanding Mechanical Engineer) in Hotel Engineering category.
- Pres. Julius conducted seminars on HVAC Design Part 1 and HVAC Design Part 2 and distributed a workbook he authored entitled "Cooling and Heating Load Calculation Manual".
- Overview of Project Management seminar was conducted by Engr. Henry Cabansag, PMP.
- PSME-WRSA Toastmasters Club under the Presidency of Engr. Jaime L. Leviste, CC, CL garnered some awards from Toastmasters International.

2010

- Chapter President Joselito L. Bentulan, PME had to realign the chapter to where it has been heading since the chapter was chartered 1995.
- As an executive order E0-835 was signed by the Philippine President Gloria M. Arroyo on 06 October 2009 declaring that Special Board Examinations (SPLBE) is going to be conducted by the Professional Regulation Commission of the Republic of the Philippines, in the Kingdom of Saudi Arabia yearly. The founding of Jeddah Review Center by Wilfredo Ruiz, PME was recognized by the chapter to handle the review classes for BS of Mechanical Engineering graduates. In order for the chapter to focus more of its activities to the benefits of general membership. It was on this term where history transpired that the past presidents of PSME-WRSA Jeddah Chapter were to hold positions such as: Wilfredo Leoncio, PME- Auditor and Ernesto C. Cala, PME - Code of Ethics Director; to fill the vacuum created by non-availability of PSME-WRSA JC membership to hold such positions. The Council of Past Presidents of PSME-WRSA Jeddah Chapter was organized to support the PSME-WRSA Jeddah Chapter.
- Officers and Board of Directors in advisory level, initially chaired by the Charter President Nildo K. Tan Jr., PME. The collective efforts of 2010 PSME-WRSA JC administration was rewarded with the following national awards: 1. Most Outstanding Chapter in Membership Growth. 2. Most Outstanding Chapter Project. 3. Most Outstanding Committee Chairman for Engr. Jeffrey Esperanza.

2011

- Pres. Rainier P. Patawi, ME shared his version of four (4) P's for the chapter's successful accomplishments: Planned purposely, Prepared prayerfully, Proceeded positively and Pursued persistently.
- The chapter made record-breaking number of National Awards from PSME National's 59th Annual Convention at Quezon City, Philippines on October 21, 2011 as follows: Most Outstanding Chapter- International; Best Chapter in Membership Growth; Most Outstanding Chapter Project - "Bayanihan Spirit for Flood Victims in Philippines"; TOME Award for Napoleon M. Cepriaso, PME in Construction category; TOME Award for Rainier P. Patawi, ME in Information Technology category.
- Nildo K. Tan, Jr., PME got the Fellow Award.
- Pres. Rainier P. Patawi was awarded Most Outstanding Chapter President- International.
- Oath-taking of new Licensed Mechanical Engineers: Engr. Antonio H. Amosco Jr., Engr. Liza L. Acosta and Engr. John E. de Leon at Al Waha Hotel, Jeddah.
- The enormous success beyond the expectation for PSME-WRSA Jeddah Chapter continued to press forward.

2012

- Pres. Napoleon M. Cepriaso, PME lead the chapter during its darkest year. Despite the imminent threat to its existence, it managed to move forward with programs and seminars to enhance the technical knowledge and skills of the members.
- PSME-WRSA Jeddah Chapter has set a benchmark of excellence in community service.
- Set another record-breaking number of national awards (12 awards out of 14 nominations) from the PSME National's 60th Annual Convention in Quezon City, Philippines on October 19, 2012.





THROUGH THE YEARS



- Pres. Napoleon M. Cepriaso got The Most Outstanding Chapter President - International Award.
- The Most Outstanding Chapter - International.
- Most Outstanding Chapter in Membership Growth.
- Most Outstanding Chapter Project - Operation "Habagat".
- Most Outstanding Publication - Jeddah PRIME MoV'ers Newsletter.
- TOME (The Outstanding Mechanical Engineer) Awards for: Joselito L. Bentulan, PME in Manufacturing category; Roel Alfon G. Banawis, ME in Design category; Ace Glen B. Garcia, ME in Consultancy category; Crisostomo C. Ortiz, ME in Community Service category.
- Achievements and Service Awards for: Wilfredo R. Ruiz, PME for Fellow Award; Lee I. Bonifacio, ME as Outstanding Secretary; and, Jemuel B. Esguerra, ME as Most Outstanding Committee Chairman.

2013

- Pres. Jaime L. Leviste, ME was one of the most active officer who served the chapter. Vice president for the year 2011 and 2012, and two-time convention chairman. Offered the lecture room of New Al Jedaani Hospital for the chapter's technical seminars and other activities. Past President PSME-WRSA Toastmasters Club and Past Area Governor.
- PSME-WRSA Toastmasters club mentored Jotun Toastmasters Club and continued the Youth Leadership Training Program to International Philippine School of Jeddah and Al Hekma International School.
- Pres. Jaime L. Leviste with Membership Director Jemuel B. Esguerra, ME met with the PSME National president in Scout Bayoran, Quezon City to seek important advice on chapter's status.
- PSME-WRSA Jeddah Chapter garnered the following National Awards from the directorate of PSME Scout Bayoran: Most Outstanding Overseas Chapter; Most Outstanding Chapter President for Engr. Jaime L. Leviste; Special Technical Competency Award; Special Humanitarian Award (for raising donation to the victims of Typhoon Yolanda).

2014

- Pres. Crisostomo C. Ortiz, ME continued to lead the chapter through its rough journey. Despite the odds, PSME-WRSA JC remained intact and committed to community service.
- Achievements and activities for this year were: Cash donation to children of Santa Veronica, San Pablo City with Engr. Jaime L. Leviste and Engr. Lee I. Bonifacio; Conducted Basketball Tournaments; Technical Seminar on General Machine Design and Parliamentary Procedure by Engr. Lorenzo O. Gaviola and TM Edgar Hernandez, respectively; Participated at KAMC Invitational Bowling Tournament; Mid-Year Convention and Technical Seminar on Design of Water Distribution System by Jemuel B. Esguerra, ME; Seminar on DSLR - Understanding Its Basic Operation by Napoleon M. Cepriaso, PME; Coastal Clean-Up Drive at Bohayrat spearheaded by APO; Plant Tour at Al Hidada Galvanizing Plant; Technical Product Presentation by DUCT Sox.

2015

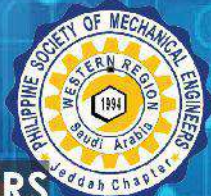
- Pres. Ruben B. Serrano, PME demonstrated exemplary leadership at this time when PSME-WRSA JC has hibernated and going through transformation.
- When PSME National was divided, PSME-WRSA Jeddah Chapter was delisted.
- Despite being delisted, Pres. Ruben B. Serrano continued the negotiation with the PSME National officers in Paredes to recognize the chapter.
- Various activities were conducted to keep the membership alive: Participation in All-Star Bowling and PPO Bowling; General Membership Meeting; Al-Khattan get-together; Last Toast for PP Lito L. Bentulan, PME; Philippine Independence Day Celebration at PCG; and, Wow Pinoy Bowling Fun Game.

2016

- For the second year, Pres. Ruben B. Serrano, PME lead the chapter.
- To give full service and benefits for the members, the chapter was chartered for the 2nd time as PSME-JWR in March 4, 2016 at Trident Hotel by PSME National-Paredes under Pres. Murry Demdam. It became the 89th chapter of PSME. Dr. Ed Malagapo conducted the oath-taking of officers and BODs as well as the chartering, graced by the presence of Vice-Consul Alexander Joseph A. Estomo. Sponsors: EGPIL and TEAMAC Arabia.
- Pres. Ruben automatically became the charter president and first president of PSME-JWR (Jeddah Western Region).
- The chapter's website www.psme-iwr.org was officially launch in May 7, 2016 thru IT Director, Engr. Paulo Taruc.
- First issue of official e-newsletter, Jeddah PrimeMovers, under PSME-JWR was issued in August.
- Continued support to PSME-WRSA Toastmasters Club.
- Conducted the following technical seminars: Press Tool Design by Ruben B. Serrano, PME; Heating, Ventilating, and Air Conditioning (HVAC) Design by Engr. Jemuel B. Esguerra, ME; and Operation and Maintenance of a Rotating Equipment by Engr. Crisostomo C. Ortiz, ME.



THROUGH THE YEARS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS

- Participated in Invitational bowling tournaments by GBI and KAMC.
- Collaborated with other civic organizations to help distressed OFWs of Saudi Oger.
- National awards at 64th PSME Annual Convention in Manila, October 19-22, 2016: Fellow Award to Napoleon M. Cepriaso, PME; TOME Award (Special Category: Biomedical) to Engr. Jaime L. Leviste; Best Website Award to www.psme-jwr.org; and, Most Outstanding Project to PSME-WRSA Toastmasters Club 6899.

2017

- Pres. Elmer Quanico, ME had turned a new leaf as the chapter continued the list growing of activities and achievements. He was the 2nd president of PSME-JWR.
- Conducted seminars and technical presentations as follows: Fire Alarm System Design and Application by Wilfredo R. Ruiz, FPSME, PME; Project Management Basics for Engineers and Technicians by Napoleon M. Cepriaso, FPSME, PME; Solar Energy System Application by Engr. Yamen Mohamed Samir Al Akeel of ICONS;
- National Awards garnered: Fellow Award for Wilfredo R. Ruiz, FPSME, PME; TOME Award for Engr. Ruben B. Serrano, PME.
- Board Exams passers: Engr. Jemuel B. Esguerra and Engr. Joel A. Santos, Professional Mechanical Engineers; and, Engr. Michael James C. Arcaparas, Mechanical Engineer.
- Sports and community activities: PPO Yearend Bowling Tournament (2nd Place); MRRD-OFW Bowling Tournament; KAMC Bowling Tournament (7th Place); PPO Bowling Tournament; and, participated in the Feeding and Relief Program for unfortunate OFWs in Saudi Oger Co.

2018

- Pres. Jemuel B. Esguerra, PME became the 3rd President of PSME-JWR and continued the legacy of the chapter.
- Gained CPD approval from PRC on various technical seminars conducted by PSME-JWR. CPD points was a mandatory requirement in PRC ID renewal.
- Conducted the following CPD-approved seminars: 5S Workplace Organization Process and TPM - Process for Improving Equipment Effectiveness (8 points); Project Management Basics for Engineers and Technicians Part-2 (8 points); Introduction to Auto Cad and Elevator Technology (4 points); Automatic Fire Protection System Design (8 CPD points); and, Sewage Lifting Station (8 points). Design and Application of HVAC DDC Controls and Building Management System (8 points); and, 3rd Annual Convention and General Membership Meeting (8 points).
- Continued the program for ME members to upgrade their license to PME. Two workshops were conducted accordingly.
- Actively participated in the activities of Philippine Professional Organization Western Region Saudi Arabia (PPO-WRSA) with the Philippine Consulate General; Meet and greet for our new Consul General Edgar Badajos; PPO-WRSA bowling tournament; Meeting with DOLE-OWWA at PCG; Welcome dinner for the new Consul General hosted by PPO-WRSA; Independence Day celebration; Professional Licensure Examination; Reception Dinner with other Fil Org at Hotel Intercontinental; and, assistance to the examinees of the Special Licensure Exams.
- Sports activities: Basketball friendly game at Escuela De Espanyol; Joined a basketball league with our team name "PrimeMovers".
- PSME-JWR achievers: Engr. Noel Bitera and Engr. Crisostomo Ortiz, Professional Mechanical Engineers; and, Engr. Arnel Layug, Registered Master Plumber.
- National awards garnered: Engr. Elmer B. Quanico, The Outstanding Mechanical Engineer (TOME) Special Category Household Refrigerating Appliances; and, Engr. Aldrin Alizon D. Lango The Outstanding Mechanical Engineer (TOME) Special Category - Advanced Cooling System.

2019

- Engr. Noel S. Bitera, PME became the 4th President of PSME-JWR but has tendered his resignation from the position effective March 01, 2019 to take rest due to health condition and to reduce stress for his healing process. Engr. Noel has been on medication from the last two months of 2018. Engr. Aldrin Alizon D. Lango, the elected Executive Vice President, by virtue of succession, became the Chapter President.
- Engr. Aldrin Alizon D. Lango also became the Vice-President for PPO WRSA.
- On February 06, 2019, a Board Resolution dated January 30, 2019 was forwarded to PSME National under the leadership of Interim National President Dr. Jeffrey Singson with the title "A BOARD RESOLUTION EARNESTLY REQUESTING THE PSME NATIONAL TO REACTIVATE "PSME-WRSA JEDDAH CHAPTER" AS CHARTERED IN 1995 INCLUDING ALL OF ITS ACHIEVEMENTS, RECOGNITIONS AND ACCOMPLISHMENTS AND MERGED WITH "PSME-JWR" AS CHARTERED IN 2016 INCLUDING ALL OF ITS ACHIEVEMENTS, RECOGNITIONS AND ACCOMPLISHMENTS". During the 2nd National Regular Board Meeting held on February 9, 2019 at the PSME Building, Sct. Bayoran St, Bgy. South Triangle, Quezon City, the Interim Board of Directors thru its Board Resolution 2019-31 has approved the resolution. On June 09, 2019 the formal letter regarding the approval of the resolution was received.





THROUGH THE YEARS



- Conducted the Technical Seminar on February 15, 2019 regarding "Communication, Leadership Skills & Wealth Management" with DTM Joey Villanueva as our Technical Speaker which was approved by PRC with 32 CPD points.
- On March 22, 2019, the Chapter conducted the First PME, AER, AET Orientation Seminar facilitated by Lorenzo O. Gaviola, ME, Crisostomo C. Ortiz, PME, and Lee I. Bonifacio, ME.
- June 29, 2019-conducted First Plant Tour regarding "Familiarization & Observation of Refrigerator Manufacturing Process" at Saudi Refrigerator Manufacturing Company Factory, Jeddah, Saudi Arabia.
- MYGMM & Technical Seminar regarding "Basic Design of Firefighting System (Wet Pipe Sprinkler)" was conducted by Engr. Roseller A. Junsay Jr. last July 26, 2019 at Saudi Refrigerator Manufacturing Company Factory, Jeddah, Saudi Arabia.
- September 19-20, 2019, we conducted "Thanksgiving and Get-together" at Al Qattan Village Beach Resort highlighted by the "Last Toast" for the PSME-JWR Charter President, Ruben B. Serrano, PME.
- October 4, 2019, conducted Plant Tour at Friesland Campina Middle East Factory regarding "Milk Production Process".
- Our Chapter have actively participated in different activities of the Philippine Professional Organization-Western Region Saudi Arabia (PPO-WRSA); Attended 17 meetings; On August 9, 10 & 11, 2019, we have assisted in the SPLE 2019 Registration of Examinees at the PCGJ and at the examination Venue at Ibn Sina Medical College; On August 12, 13, & 14, 2019, we have assisted in the conduct of SPLE 2019 at Ibn Sina Medical College; Participated in the Coastal Clean Up Drive at Bohayrat, Jeddah last October 18, 2019 with the theme "Taking Action for a trash free environment".
- The Chapter have also participated in some activities of the Philippine Consulate General of Jeddah; Have attended first ever State of Post Address by the Hon. Edgar B. Badajos last December 6, 2018; Attended the Anti-Terrorism Information Campaign on June 15, 2019 conducted by delegates from Philippine Embassy; Attended the 121st Anniversary of Philippine Independence on June 17, 2019 at the Hotel Intercontinental, Jeddah; Attended the HOPPA or the Huwarang OFW Pamilyang Pilipino Award on November 8, 2018.
- 2019 PSME-WRSA JC achievers.

Chapter First Batch ASEAN Engineers

1. Engr. Willyn D. Espino
2. Engr. Lee I. Bonifacio
3. Engr. Amos Joel A. Acosta
4. Engr. Liza L. Acosta

2019 SPLE Passers for Master Plumber

1. Engr. Maria May M. Atole
2. Engr. Napoleon M. Castañeda

2020

- The leadership of elected Chapter President Engr. Aldrin Alizon D. Lango defied the odds brought by the Covid-19 pandemic. Through the virtual platform "Zoom", the Chapter were able to discharge its functions while observing the government-imposed health protocols.
- Conducted ASEAN Engineering Register Technical Writeshop on February 7, 2020. The writeshop Technical Speaker was the PTC MENA Deputy in the Western Region, Engr. Richard R. Garcia, PECE, APEC Eng., ACPE, FACPE, AE. On February 21, 2020, the aspirants were able to pass their interview, on July 24, 2020 their documents have been completed and on November 6, 2020 the documents have been delivered to PTC by our Past President Engr. Rainier P. Patawi.
- Our Chapter was able to organize technical seminar on "The Role of BIM in Sustainability, Energy and Environment" conducted on April 26, 2020 by Ace Glen Garcia, EIT, LEED AP, WELL AP, Mechanical Designer & Energy Modelling Lead at MAT 4Site Engineers, Canada.
- Organized "PME Orientation and Writeshop" conducted by Engr. Napoleon M. Cepriaso, FPSME, PME. The Event was also attended by Engr. Nardito M. Cornelio JR, PME, CFSP, CEM as our Guest Speaker.
- We have conducted "Webinar on Autonomous Maintenance" on June 19, 2020 which was presented by Engr. Greg A. Gulmatico. The webinar was attended by participants not only from the Chapter members but also by other interested individuals.
- Our Chapter have actively participated in 11th Middle East Regional Conference. The event hosted by PSME-SA and was conducted on July 31 to August 1, 2020.
- Conducted a "Virtual Membership Kamustahan" on August 14, 2020 in order to assess the current status of our general membership. We also conducted a virtual kumustahan with the COPPs on September 11, 2020 to know their status, exchange pleasantries and somehow break the boredom of the lockdown.

- The Mid-Year General Membership Meeting was conducted On August 28, 2020 and was filled with technical presentations from our sponsors and professional technical presenters. For the first time in the history of PSME-WRSA Jeddah Chapter, the Constitution and By-Laws (CBL) was ratified by the general membership.
- Extended assistance to our fellow Filipinos in the Philippine Consulate General in Jeddah male and female wards. Generated an amount of 1,800SAR that has translated into 90 pieces of single mattress. Along with our assistance were 21 pieces of one-liter bottle of Sanitizers courtesy of Reza Chemicals which was facilitated by our Plant Tours Director Engr. Orlan C. Moriones, and 15 boxes of Yamama Cakes courtesy of Engr. Oliver O. Salazar, our Professional Enhancement Director. Delivered the said assistance on September 18, 2020 facilitated by Madam Consul Mary Jennifer Dingal.
- Organized the first Virtual Plant Tour and Election of Year 2021 BODs and was conducted on October 2, 2020. In line with the PSME's theme, "Mechanical Engineers: The Nation's Prime Mover of Industrial Revolution 4.0".
- Achievers of this year, our Chapter's second batch of approved **ASEAN Engineers**.

- | | |
|---------------------------------|-------------------------------------|
| 1. Engr. Maria May M. Atole | 6. Engr. Orlan C. Moriones |
| 2. Engr. Napoleon M. Cepriaso | 7. Engr. Crisostomo C. Ortiz |
| 3. Engr. Aldrin Alizon D. Lango | 8. Engr. Antonio Elmer L. Quintilla |
| 4. Engr. John Ray O. Madla | 9. Engr. Oliver O. Salazar |
| 5. Engr. Leonard P. Meriales | 10. Engr. Jose Melvin D. Santos |



PHOTO SOLUTIONS, ETC.

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Congratulations PSME-WRSA Jeddah Chapter on its 18th Annual Convention



napoleon m cepriaso pme fpsme asean eng



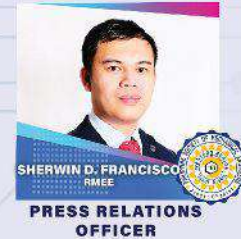
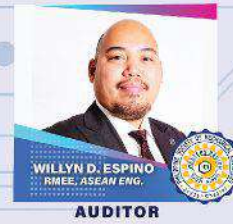
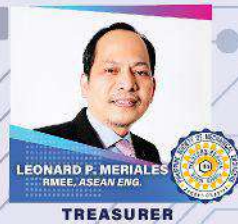
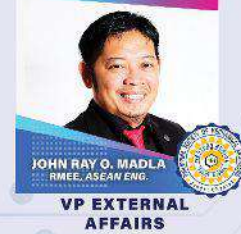
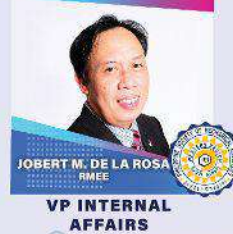
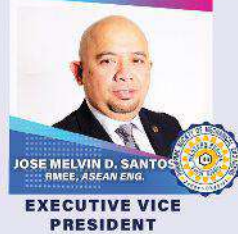
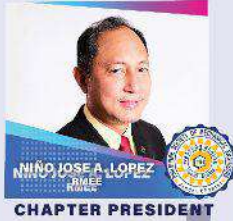
2022 BOARD OF DIRECTORS



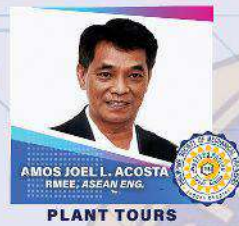
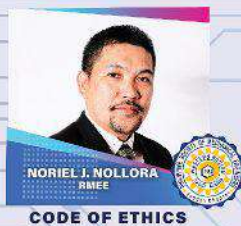
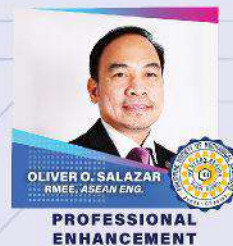
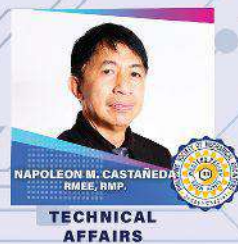
2022

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EXECUTIVE OFFICERS



DIRECTORS



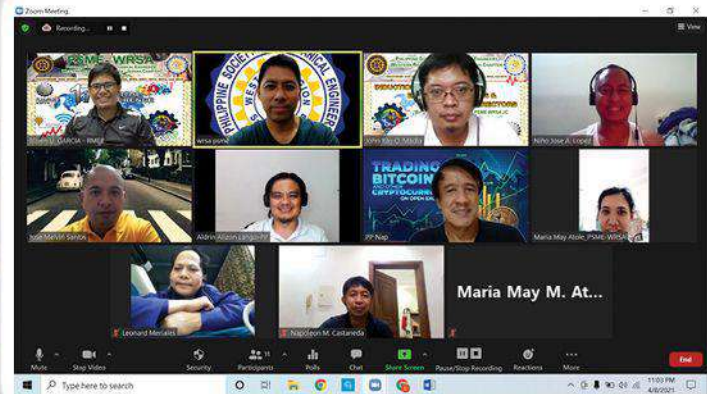
"Mechanical Engineers: Sustaining Digital Transformation Towards Industrial Excellence."



REGULAR MEETINGS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS





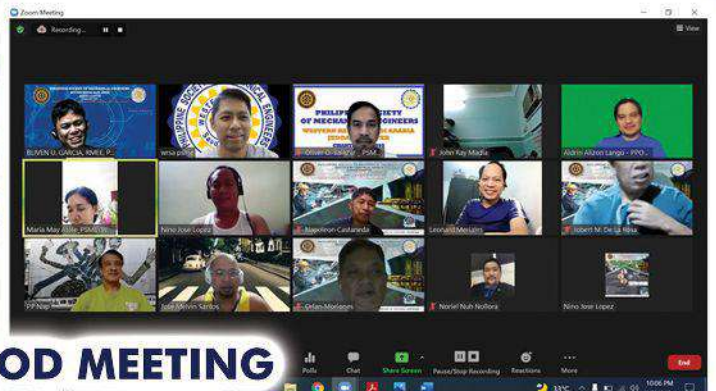
COMMITTEE AND SPECIAL MEETINGS



2022 PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS



SPECIAL BOD MEETING



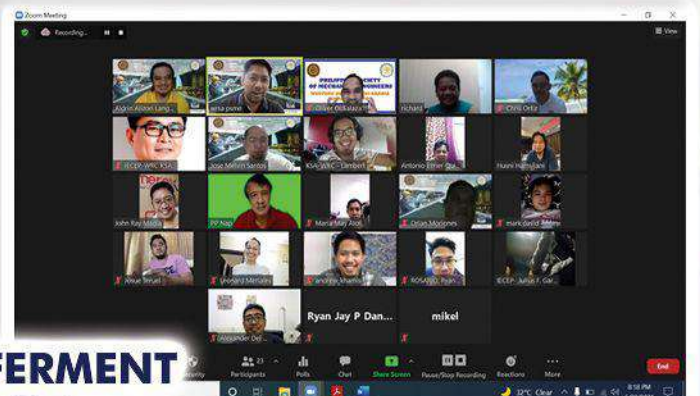
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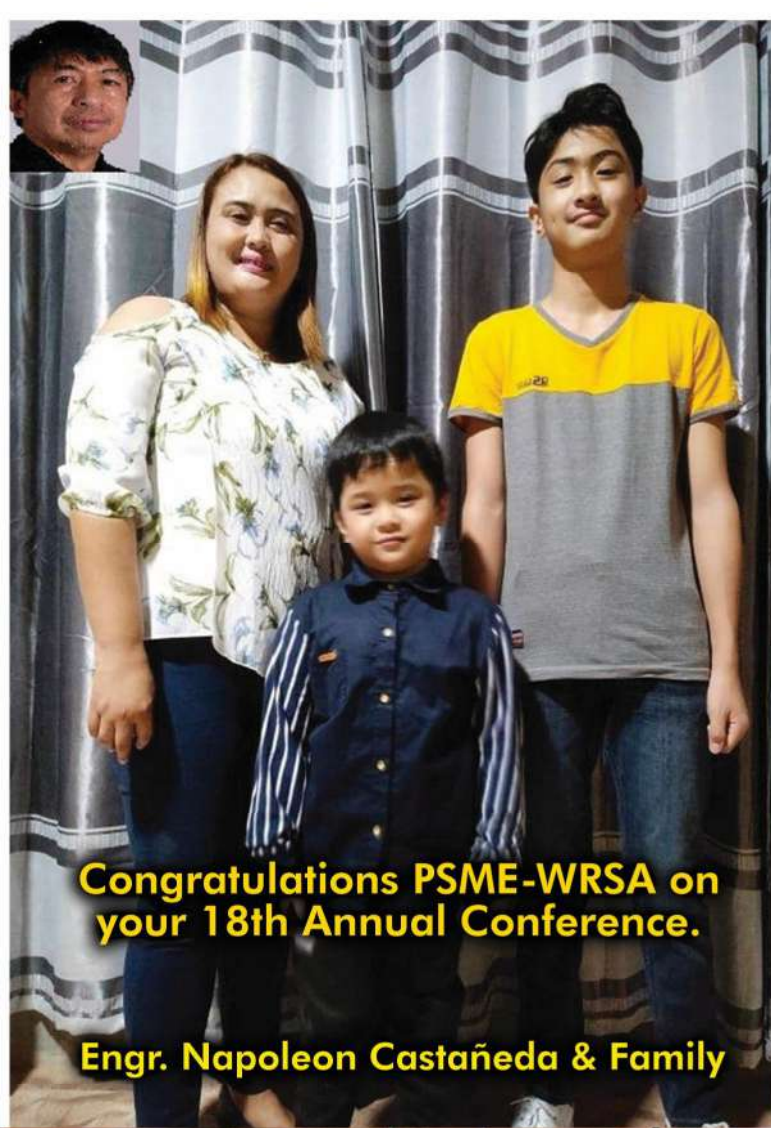
UPDATING MEMBERSHIP



AER CONFERMENT



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Engr. Napoleon Castañeda & Family



**Congratulations!
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From: Eng. Orlan Moriones & Family

**CONGRATULATIONS,
PSME-WRSA JC ON YOUR
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**FROM : ENGR. NIÑO JOSE A.
LOPEZ & FAMILY**

**CONGRATULATIONS
ON YOUR 18TH ANNUAL
CONFERENCE PSME-WRSA.**



FROM: ENG. MARIA MAY M. ATOLE

**CONGRATULATION
PSME-WRSA JC
ON ITS 18TH ANNUAL
FROM:
JUNSAY FAMILY**





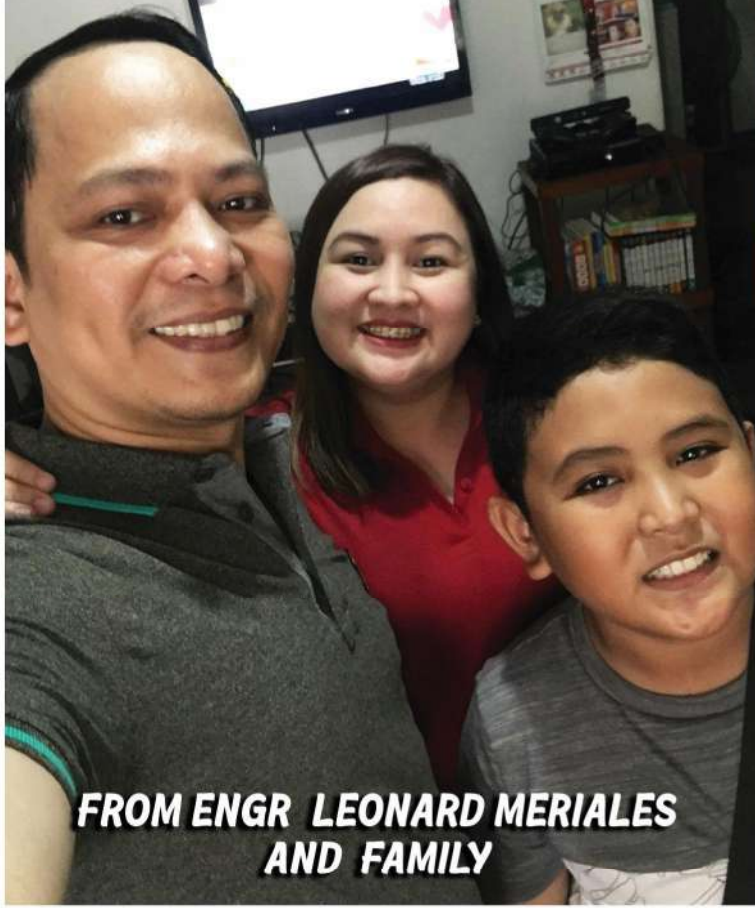
*Greetings from
Garcia Family*



PSME WRSA
18th Annual Convention
Friday, December 3, 2021 9am

www.psme-wrsa.com

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**FROM ENGR LEONARD MERIALES
AND FAMILY**



CONGRATULATIONS!!!

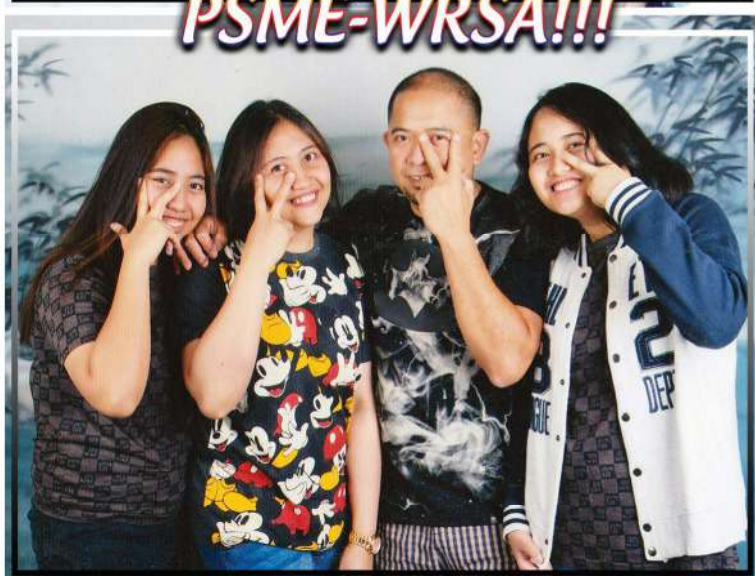
**PSME-WRSA JC
on its
18th ANNUAL
CONFERENCE
from:
Engr. John Ray Madla
and Family**



GREETINGS FROM SANTOS FAMILY



**CONGRATULATIONS
PSME-WRSA!!!**



**CONGRATULATIONS!
PSME-WRSA TO IT'S
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**FROM:
ENGR. REY ANTHONY MEJIA
AND FAMILY**





**CONGRATULATIONS PSME-
WRSA JEDDAH CHAPTER!!!
ON ITS 18TH ANNUAL
CONFERENCE
FROM: BONIFACIO and
AGBING FAMILY**



**CONGRATULATIONS TO
PSME-WRSA JC ON ITS
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**FROM:
ENGR JOBERT DE LA ROSA AND FAMILY**

**PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
WESTERN REGION SAUDI ARABIA JEDDAH CHAPTER**
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18TH ANNUAL CONFERENCE 2022
VIRTUAL GENERAL MEMBERSHIP MEETING

KEYNOTE SPEAKER - TECHNICAL CONFERENCE
HON. EDGAR TOMAS AUXILIAN
Consul General - PCG Jeddah

KEYNOTE SPEAKER AND INDUCTION OFFICER
ENGR. JERRY D. ASUNCION
2021 PSME National President

INSPIRATIONAL SPEAKER
ENGR. MELANIE P. BANAYOS
2022 PSME National President-Elect

INSPIRATIONAL SPEAKER
HON. ROEL B. MARTIN
Labor Attache - PCO Jeddah

TECHNICAL SPEAKERS
"High Current Generator Switchgear"
ENGR. TEODORO M. AGUIRRE
"Elevator Design & Standards 201 (Safety Systems)"
ENGR. LORENZO D. GAVIOLA

VIA zoom
FRIDAY 3 DECEMBER 2021
8:30 AM - 5:00 PM (KSA TIME)
1:30 PM - 10:00 PM (PH TIME)

FOR INQUIRIES PLEASE CALL:
ENGR. LEE BONIFACIO- 054 911 5811
ENGR. JOHN RAY MADLA- 056 404 9883
ENGR. NINO JOSE LOPEZ- 053 204 4768

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SALES MANAGER

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