

PLASTIC ABHIYANTA

IN IRON AND STEEL INDUSTRY



ANULON[®]

RANGE OF ENGINEERING PLASTICS

PLASTIC ABHIYANTA

ABOUT US

Welcome to Plastic Abhiyanta, a pioneering name in engineering plastics dedicated to revolutionizing the Iron and Steel industry for over 4 decades. Founded by the visionary Mr. Raj Mohan Maheshwari, our company stands as a testament to innovation and excellence.

At Plastic Abhiyanta, our expertise lies in leveraging cutting-edge engineering plastics to enhance efficiency, durability, and performance within the Iron and Steel sector. With a commitment to quality and innovation, we strive to redefine industry standards, providing bespoke solutions tailored to meet the unique demands of our clientele.

Driven by a passion for excellence, we continuously push the boundaries of engineering plastics, delivering unparalleled value, reliability, and sustainability to our partners in the Iron and Steel industry. Partner with us for transformative solutions that elevate your operations to new heights.

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MINES

Revolutionizing Mining Operations with Engineering Plastics

The mining industry, often characterized by harsh environments and demanding conditions, has seen a significant transformation with the integration of engineering plastics. These advanced materials have emerged as game-changers, offering a multitude of benefits that enhance efficiency, safety, and sustainability in mining operations.

Durability in Adverse Environments

Engineering plastics, renowned for their exceptional durability and resistance to abrasion, corrosion, and extreme temperatures, have found a pivotal role in mining equipment. Components made from these materials, such as polyurethane liners for chutes or conveyor belts, exhibit remarkable wear resistance, prolonging the lifespan of critical machinery in the mining process.

Weight Reduction and Increased Productivity

The lightweight nature of engineering plastics presents a marked advantage in mining equipment. By replacing traditional metallic parts with these lightweight alternatives, machinery becomes more agile and fuel-efficient, contributing to increased productivity while reducing operational costs.



Enhanced Safety and Reduced Maintenance

The non-conductive properties of certain engineering plastics make them ideal for electrical insulation and component housings in mining applications, minimizing the risk of electrical hazards. Additionally, their self-lubricating characteristics reduce friction, resulting in decreased maintenance requirements and downtime for mining machinery.

Environmental Sustainability

Beyond their performance benefits, engineering plastics align with the growing focus on sustainability within the mining sector. These materials are recyclable, contributing to the industry's efforts to minimize waste and reduce its environmental footprint.

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MINES

The following are the products needed in the mining industry

- **LOOK OUT GLASS & CONTROL ROOM GLASS**

This high-performance material offers exceptional clarity and optical properties, ensuring clear visibility for operators while resisting scratches, abrasions, and harsh weather conditions. Its lightweight yet robust nature enhances vehicle efficiency, making it a reliable choice to bolster safety and performance in mining operations.

- **HOPPER AND CHUTE LINER**

These liners, engineered with high-quality plastic materials, offer exceptional durability and wear resistance. Their unique composition enables them to withstand the abrasive forces generated during the handling of bulk materials, preventing premature wear and damage to the equipment. The plastic liners' smooth surface properties facilitate the seamless flow of materials, reducing friction and the likelihood of blockages or material build-up.

These liners not only enhance the lifespan of hoppers and chutes but also contribute to increased operational efficiency by minimizing downtime due to maintenance.

- **OTHER LINER AND GUIDE APPLICATION**

Plastic liners and guides are crucial in mining for safety and efficiency. They resist wear and impact, safeguarding equipment from heavy materials. These liners shield surfaces prone to abrasion, reducing damage and maintenance needs. Guides, with their precise design, accurately direct material flow in equipment and conveyor systems, preventing spillage and ensuring safe handling. This enhances operational efficiency and safety while protecting both equipment and materials.

We specialize in supplying and implementing high-quality plastics for various plants and mining operations. However, our commitment doesn't stop there. Continuously striving for innovation, we engage closely with users across multiple mining companies, understanding their unique challenges and requirements. This collaborative approach fuels our constant development of newer, more advanced products. By actively listening to and comprehending the issues faced in diverse mining environments, we aim to engineer cutting-edge solutions tailored to address specific needs, ensuring enhanced performance, durability, and safety in the ever-evolving landscape of mining operations.

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RAW MATERIAL HANDLING

In the realm of the iron and steel industry, the efficient handling of raw materials like iron ore, coal, and limestone stands as a critical cornerstone in the production process. Here, engineering plastics emerge as indispensable assets, revolutionizing the way these materials are managed and transported within plants.

Optimised Wear Resistance

The harsh nature of raw materials often poses challenges to the equipment used in handling. Engineering plastics, step in as protective liners within chutes, hoppers, and conveyor systems. Their exceptional wear resistance minimizes abrasion, ensuring prolonged equipment lifespan and reducing maintenance downtime.

Streamlined Material Flow

Plastics, in the form of belt guides, rollers, or liners, facilitate smooth material flow along conveyor belts. Their low-friction surfaces prevent jams, minimizing damage to the conveying systems and reducing operational interruptions.

Corrosion and Chemical Resistance

Certain plastics boast remarkable resistance to corrosive elements present in raw materials. This property ensures the integrity of storage tanks, pipes, and containers used for handling chemicals or corrosive materials, contributing to a longer lifecycle of these essential components.

Elevated Efficiency and Reliability

Engineering plastics' lightweight nature optimizes energy consumption in handling systems while reducing stress on equipment. This weight reduction translates into increased operational efficiency and reduced maintenance costs, ultimately enhancing the overall reliability of the production process.

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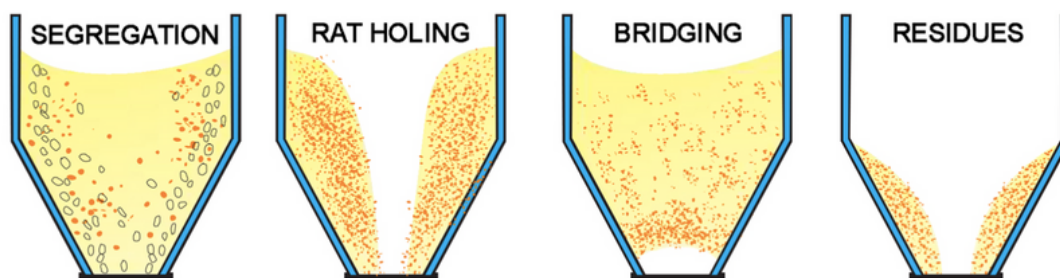
RAW MATERIAL HANDLING

Here are different types of engineering plastics commonly employed along with their uses:

HOPPER AND CHUTE LINERS

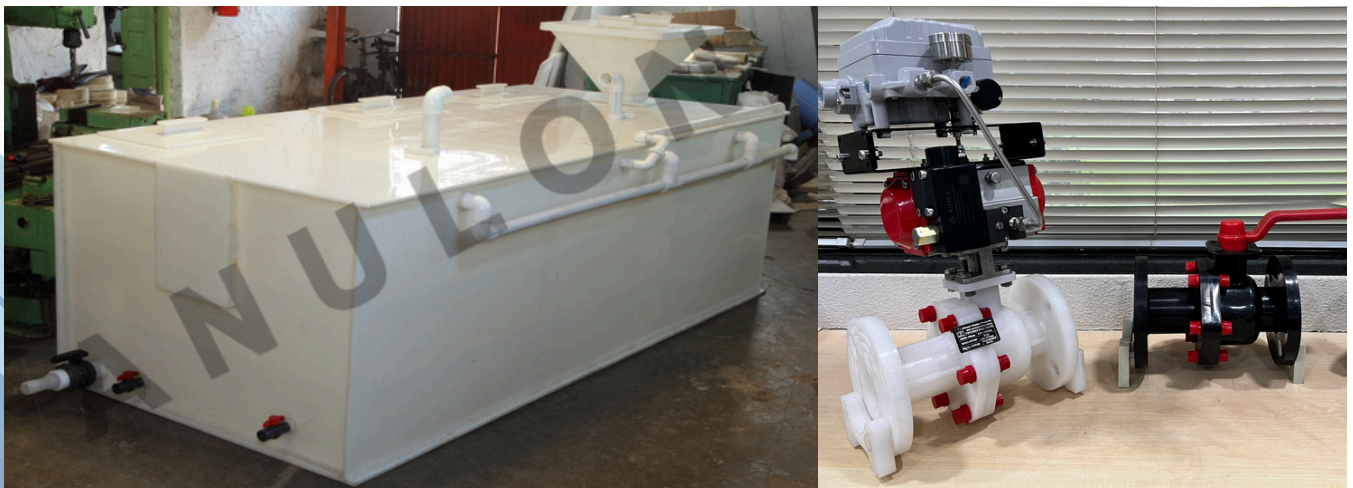
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These liners not only enhance the lifespan of hoppers and chutes but also contribute to increased operational efficiency by minimizing downtime due to maintenance.



CHEMICAL STORAGE TANK AND VALVES

Plastic chemical storage tanks and valves are preferred for their exceptional chemical resistance, durability, and cost-effectiveness. They withstand a wide range of chemicals without corroding or degrading, ensuring long-term reliability. Their lightweight nature makes them easy to install, reducing costs and installation time. Additionally, plastics offer design flexibility, minimizing the risk of contamination and requiring minimal maintenance while providing a safe and reliable solution for chemical storage and handling.



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RAW MATERIAL HANDLING

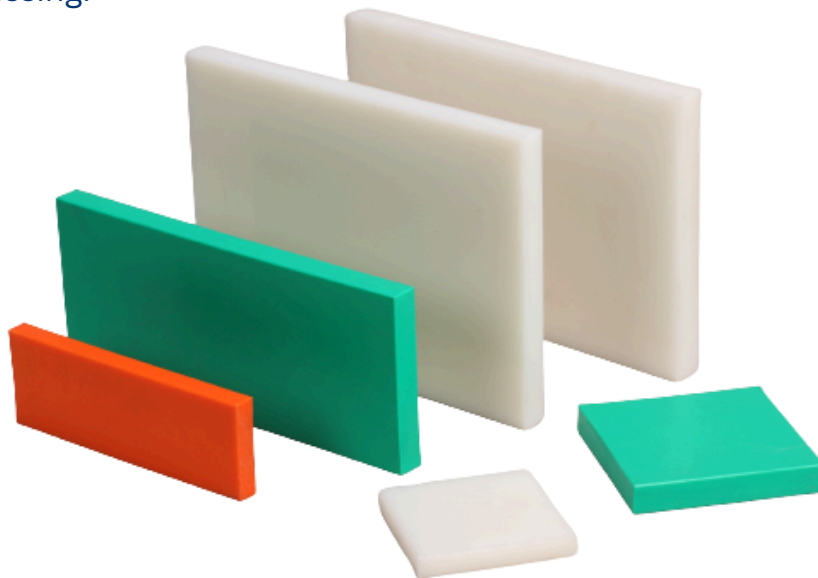
DUST PROTECTING CURTAINS

Plastic dust protection curtains are transparent barriers used in industries to contain and control dust or particles. They offer visibility while confining dust, ensuring safety, flexibility, and cost-effectiveness in maintaining a clean and safe work environment. These curtains are easy to install, provide protection from dust exposure, and contribute to noise and temperature control in industrial settings.



SLIDING PLATE

A plastic vibrating sliding plate is a component used in machinery to control material flow. Made from durable plastics, it aids in guiding material movement through a vibrating motion. These plates are employed in vibrating conveyors or screens, facilitating smoother material flow and separation, particularly in industries like mining or material processing.



These engineering plastics serve crucial roles in different stages of raw material handling within iron and steel plants. Their unique properties contribute to minimizing wear and tear, reducing maintenance, and ensuring the efficient and reliable handling of materials throughout the production process.

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COKE OVEN

Plastic Applications in Coke Oven Plants

Coke oven plants operate under extreme conditions involving high temperatures, mechanical stress, and chemical exposure. The use of engineered plastics in various components has become increasingly popular due to their durability, heat resistance, and self-lubricating properties. Key plastic components in coke oven plants include:

PINS AND BUSHINGS

In the demanding environment of the coke ramming area within the battery unit of a coke oven plant, Anulon engineering polymer pins and bushings have emerged as an optimal solution for enhancing performance and durability. The coke ramming process involves intense mechanical stress, high temperatures, and abrasive conditions, requiring components that can withstand such extremes. Anulon pins and bushings are designed to offer superior wear resistance, low friction, and excellent load-bearing capacity, making them ideal for these challenging conditions. Their self-lubricating properties minimize the need for frequent greasing, reducing maintenance downtime and improving operational efficiency. Additionally, Anulon materials demonstrate exceptional resistance to heat, ensuring stability and performance even in the high-temperature environment typical of coke oven battery units. These polymer components also effectively resist corrosion and chemical exposure, further extending their service life. By replacing traditional metal components with Anulon polymer alternatives, steel plants can achieve improved reliability, reduced operational costs, and enhanced productivity in their coke ramming processes.

GUIDE PLATES

Guide plates are critical components in the coke oven area, ensuring precise alignment and smooth movement of heavy equipment during the coke pushing and ramming process. These plates endure constant friction, heavy loads, and exposure to high temperatures and abrasive particles. Traditional metal guide plates are prone to wear, corrosion, and require frequent lubrication, leading to increased maintenance efforts. In contrast, guide plates made from Anulon engineering polymers offer superior performance due to their excellent wear resistance, self-lubricating properties, and ability to withstand extreme conditions. The Anulon range of polymers, known for their high impact strength, dimensional stability, and chemical resistance, ensures prolonged service life and reduced maintenance requirements. Their lightweight nature also simplifies handling and installation. By adopting Anulon engineering polymer guide plates, steel plants can achieve improved operational efficiency, reduced downtime, and enhanced durability in the demanding coke oven environment.

PLASTIC ABHIYANTA

COKE OVEN

GUIDE ROLLERS FOR HAMMERS

In the harsh environment of coke oven plants, guide rollers endure heavy impacts and extreme temperatures. Anulon polymer rollers excel in these conditions by offering exceptional impact strength, abrasion resistance, and reduced friction. Their self-lubricating design minimizes maintenance needs, while their resistance to heat and chemical exposure ensures reliable performance over extended periods. By switching to Anulon polymer rollers, steel plants can achieve smoother operations, fewer breakdowns, and improved equipment longevity.

SCRAPERS

Operating in abrasive, high-heat environments, scrapers must withstand constant wear. Anulon engineering polymer scrapers deliver unmatched durability and efficiency. Their non-metallic build prevents damage to adjacent equipment, reducing wear and tear on metal surfaces. Additionally, their lightweight design simplifies handling and maintenance, making them a superior alternative to traditional metal scrapers for improving uptime and enhancing overall plant efficiency.

By incorporating Anulon engineering polymers in these critical components, steel plants can significantly boost operational efficiency, reduce maintenance costs, and ensure greater reliability in their coke oven processes.

PLASTIC ABHIYANTA

SINTERING AND PELLETIZATION

In the iron and steel industry, engineering plastics play a critical role in sintering and pelletization processes. These processes involve extreme temperatures, heavy mechanical loads, and demanding conditions, requiring materials that offer resilience, durability, and reliability. Here's how engineering plastics are employed in sintering and pelletization plants:

1. High-Temperature Applications

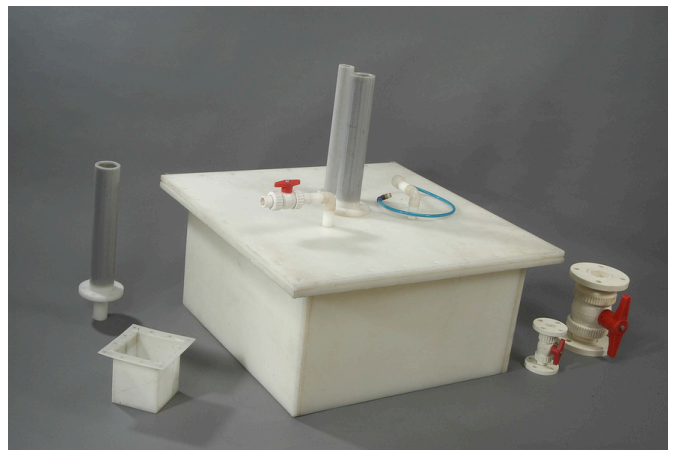
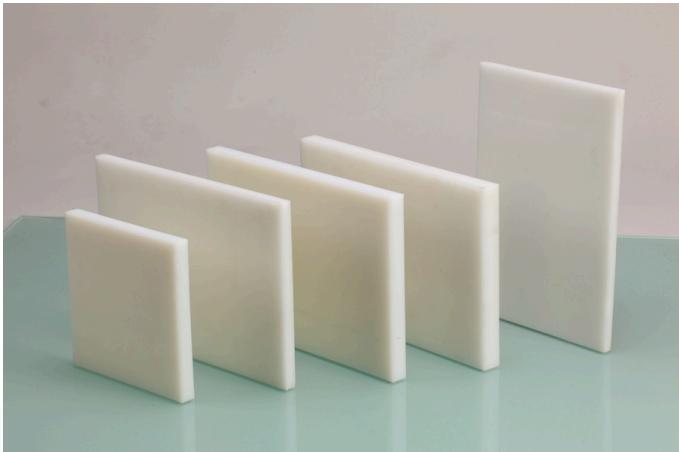
2. Wear-Resistant Components

3. Conveyor Systems

4. Dust Control and Containment

5. Chemical Resistance

The use of engineering plastics in sintering and pelletization plants within the iron and steel industry underscores the significance of materials that can withstand high temperatures, abrasion, and chemical exposure while maintaining operational efficiency.



PLASTIC ABHIYANTA

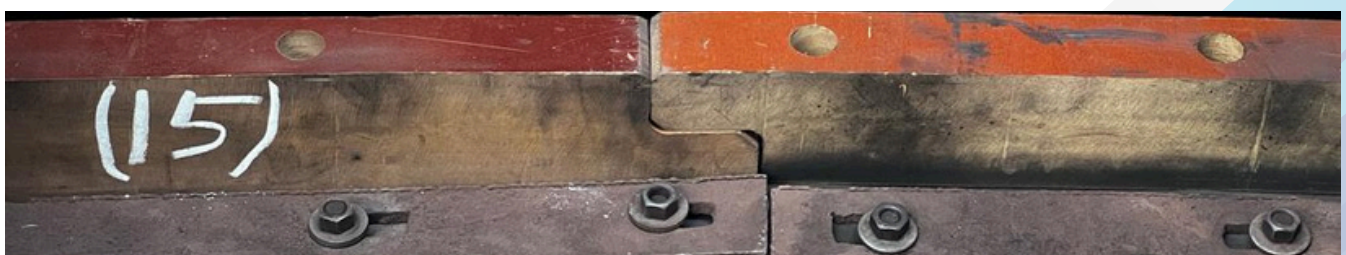
SINTERING AND PELLETIZATION

ANULON COTTEX SEALS

Specialised sealing solutions engineered with high-performance materials. These seals are designed to create airtight compartments within the sinter cooling towers. Their primary function is to isolate different zones within the tower, enabling controlled airflow and temperature distribution during the cooling process.

Role of Anulon Cottex Seals in Sinter Cooling Towers

- **Airflow Control:** Anulon Cottex seals facilitate precise regulation of airflow within the cooling tower. By sealing off specific zones, they help direct and control the passage of air, ensuring uniform cooling of the sintered material.
- **Temperature Management:** These seals aid in maintaining consistent temperature profiles within the cooling tower. By preventing air leakages between different sections, they contribute to achieving the desired cooling rates, thereby preserving the quality of the sintered material.
- **Reduced Energy Consumption:** Anulon Cottex seals assist in optimizing the cooling process, enhancing its efficiency. The controlled airflow and minimized heat loss due to effective sealing lead to reduced energy consumption during the cooling operation.
- **Enhanced Equipment Longevity:** By maintaining ideal operating conditions and preventing temperature variations, Anulon Cottex seals contribute to prolonging the lifespan of the cooling tower equipment. They reduce wear and tear caused by extreme temperatures and irregular cooling patterns.



PLASTIC ABHIYANTA

SINTERING AND PELLETIZATION

HOPPER AND CHUTE LINERS

These liners, engineered with high-quality plastic materials, offer exceptional durability and wear resistance. Their unique composition enables them to withstand the abrasive forces generated during the handling of bulk materials, preventing premature wear and damage to the equipment. The plastic liners' smooth surface properties facilitate the seamless flow of materials, reducing friction and the likelihood of blockages or material build-up.

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DUST PROTECTING CURTAINS

Plastic dust protection curtains are transparent barriers used in industries to contain and control dust or particles. They offer visibility while confining dust, ensuring safety, flexibility, and cost-effectiveness in maintaining a clean and safe work environment. These curtains are easy to install, provide protection from dust exposure, and contribute to noise and temperature control in industrial settings.



PLASTIC ABHIYANTA

SINTERING AND PELLETIZATION

TRANSPARENT ROOFING SHEET

ANULON 122 roofing sheets, integrated within the convener system, stand as a testament to the evolution of roofing technologies. These sheets redefine conventional roofing by seamlessly blending durability, adaptability, and aesthetic finesse. Nestled within the convener system, they harness their innate strength to withstand diverse climatic challenges while ensuring an abundance of natural light permeates through spaces. Their versatility extends beyond functionality; they effortlessly complement architectural designs, transforming structures into modern marvels. As an integral part of the convener system, ANULON 122 roofing sheets not only deliver superior performance but also elevate the overall appeal of any construction project, underscoring their indispensable role in contemporary architectural landscapes.

PELLETIZING DISK LINER

The integration of ANULON 94 in pelletizing discs marks a significant leap forward in material engineering within the domain of industrial machinery. Renowned for its exceptional strength, low friction, and wear resistance, ANULON 94 revolutionizes the efficiency and longevity of pelletizing discs. Its innate characteristics enable these discs to withstand abrasive forces and high temperatures encountered during the pelletizing process, ensuring prolonged operational durability. The remarkable lubricity of ANULON 94 reduces frictional resistance, facilitating smoother material flow and preventing adhesion or build up of pellets on the discs' surface. By harnessing the unique properties of ANULON 94, pelletizing discs exhibit enhanced performance, reduced maintenance requirements, and increased productivity, thus solidifying ANULON 94's integral role in optimizing pelletizing operations across various industries.



PLASTIC ABHIYANTA

HOT ROLLING MILL

Engineering plastics serve a pivotal role in the demanding environment of hot rolling mill plants within the iron and steel industry. These specialized plastics, designed to withstand extreme temperatures, mechanical stress, and corrosive conditions, contribute significantly to various aspects of hot rolling operations.

HIGH TEMPERATURE RESISTANT COMPONENTS

In hot rolling mills, engineering plastics such as Polyether Ether Ketone (PEEK) or PTFE are utilized in components subjected to extreme heat. These materials ensure structural integrity and durability in parts operating at elevated temperatures.

WEAR RESISTANT PARTS

Plastic components, including Stripper, wiper, Deflector ledge, and other components are integrated into hot rolling mill machinery. These materials possess high wear resistance, minimizing friction and reducing wear on critical equipment parts.

INSULATING MATERIAL

Plastics play a role in insulating materials used within the hot rolling mill. They contribute to thermal insulation in components that require heat retention or controlled temperatures, enhancing efficiency and reducing heat loss.

CHEMICAL-RESISTANT MATERIALS

Certain plastics, particularly those resistant to chemicals, are employed in components that handle reactive substances or corrosive materials within the hot rolling mill environment, ensuring safe handling and longevity of equipment.

STRUCTURAL COMPONENTS

Engineering plastics with high strength, corrosion resistance, and capability to withstand mechanical stresses are employed in specific structural applications within the hot rolling mill, ensuring robustness and longevity.

The utilisation of engineering plastics within hot rolling mill plants underscores their critical role in maintaining operational efficiency, equipment durability, and safety in the iron and steel industry.

PLASTIC ABHIYANTA

HOT ROLLING MILL

STRIPPER, WIPER AND DEFLECTOR LEDGE

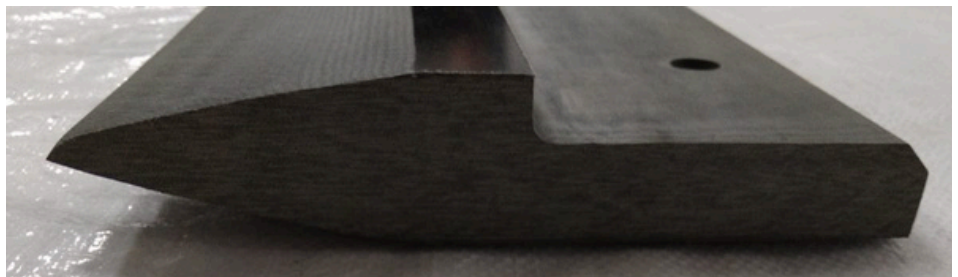
In the intense and demanding environment of a hot strip mill within the iron and steel industry, the effective operation of stripper wipers and deflector ledges is crucial for maintaining the quality and efficiency of the rolling process. These components, often made from specialized materials, play vital roles in controlling and guiding the hot steel strip as it progresses through the mill.

STRIPPER & WIPER

Purpose and Importance: Stripper wipers are positioned at critical points within the hot strip mill, precisely where the steel strip exits the rolling process. These wipers serve the crucial function of removing any residual scale, oxides, or contaminants from the surface of the strip. This cleaning action is essential to ensure the final product meets stringent quality standards by providing a clean, uniform surface finish.

DEFLECTOR LEDGE

Purpose and Importance: Deflector ledges are strategically positioned guides or barriers within the hot strip mill, crucial for directing the movement and maintaining the alignment of the hot steel strip as it progresses through various rolling processes. They serve to control the strip's path, ensuring it remains properly aligned and guided throughout the rolling operation, minimizing the risk of edge defects or misalignment.



PLASTIC ABHIYANTA

HOT ROLLING MILL

HIGH TEMPERATURE COMPONENTS

Anulon 220 components play a crucial role in the operations of a hot strip mill within the iron and steel industry. Renowned for their exceptional heat resistance, chemical inertness, and low friction properties, Anulon 220 components are integral in ensuring efficient and smooth processing of hot steel strips. These specialized components, crafted from Anulon 220, are utilized in critical areas where high temperatures and demanding conditions prevail. Their robustness and non-stick characteristics contribute significantly to reducing friction, minimizing wear and tear, and enhancing the overall performance and longevity of machinery within the hot strip mill environment.



Our commitment to innovation and expertise in engineering materials positions us strongly to develop tailored solutions for the diverse needs of hot strip mills. With a robust foundation in material science and a dedicated focus on research and development, we possess the capability to craft specialized products as per the unique requirements of hot strip mill operations. Our adeptness in creating bespoke components, leveraging cutting-edge materials, and adapting to evolving industry demands allows us to offer a wide spectrum of solutions. Whether it's enhancing heat resistance, improving mechanical properties, or addressing specific challenges within the hot strip mill, we stand prepared to collaborate and innovate, ensuring the delivery of custom-made products that precisely meet the industry's needs.

PLASTIC ABHIYANTA

COLD ROLLING MILL

The realm of engineering plastics presents a realm of possibilities in the landscape of cold rolling mills within the iron and steel industry. Cold rolling processes demand precision, durability, and resistance to extreme conditions, making engineering plastics a vital resource in enhancing efficiency and performance.

Enhanced Durability and Performance

Engineering plastics, such as Polyether Ether Ketone (PEEK), Polyamide (PA), or Polytetrafluoroethylene (PTFE), offer exceptional mechanical properties and resistance to wear. When utilized in cold rolling mills, these materials impart enhanced durability to components subjected to constant stress and pressure, prolonging equipment lifespan and minimizing maintenance requirements.

Temperature Resistance and Insulation

In cold rolling mills where temperature control is paramount, engineering plastics play a pivotal role. Their ability to withstand extremely cold temperatures while maintaining mechanical integrity is instrumental in maintaining operational stability. Furthermore, these plastics provide excellent insulation, safeguarding critical components from thermal fluctuations and preventing heat loss, ensuring precise control over the rolling process.

Friction Reduction and Surface Quality

Engineering plastics' low coefficient of friction contributes significantly to improving surface quality during the cold rolling process. Components crafted from these materials, such as guide elements or bearing surfaces, minimize frictional forces, reducing surface imperfections and enhancing the quality of the rolled steel.

Corrosion Resistance and Material Compatibility

Certain engineering plastics exhibit exceptional corrosion resistance and compatibility with various chemicals or process fluids encountered in cold rolling operations. This resistance ensures prolonged component life and maintains product integrity in corrosive environments.

Innovative Solutions and Customization

The versatility of engineering plastics allows for innovative solutions tailored to the specific needs of cold-rolling mills. Customized components, precisely engineered using these materials, address unique challenges, optimize operational efficiency, and contribute to the overall productivity and sustainability of cold rolling processes.

The scope of engineering plastics in cold rolling mills is expansive and multifaceted. Their contributions to enhancing durability, temperature resistance, friction reduction, corrosion resistance, and customizability pave the way for improved efficiency and product quality within the iron and steel industry.

PLASTIC ABHIYANTA

COLD ROLLING MILL

PICKLING TANK

Pickling tanks are fundamental components in steel manufacturing plants, serving a crucial role in the surface treatment of steel products. These tanks are specially designed to house pickling solutions, typically acidic baths that remove surface impurities, scale, and oxides from steel surfaces. Constructed from materials such as high-density polyethylene (HDPE), polypropylene (PP), or specialized thermoplastics, pickling tanks offer excellent resistance to the corrosive nature of pickling acids. Their robustness, chemical inertness, and ability to withstand extreme temperatures make them indispensable in facilitating the pickling process. With varying capacities and configurations, these tanks provide an efficient and controlled environment for treating steel, ensuring the production of high-quality, clean surfaces, a prerequisite for subsequent manufacturing processes in the steel industry.



DUST PROTECTING CURTAINS

Plastic dust protection curtains are transparent barriers used in industries to contain and control dust or particles. They offer visibility while confining dust, ensuring safety, flexibility, and cost-effectiveness in maintaining a clean and safe work environment. These curtains are easy to install, provide protection from dust exposure, and contribute to noise and temperature control in industrial settings.

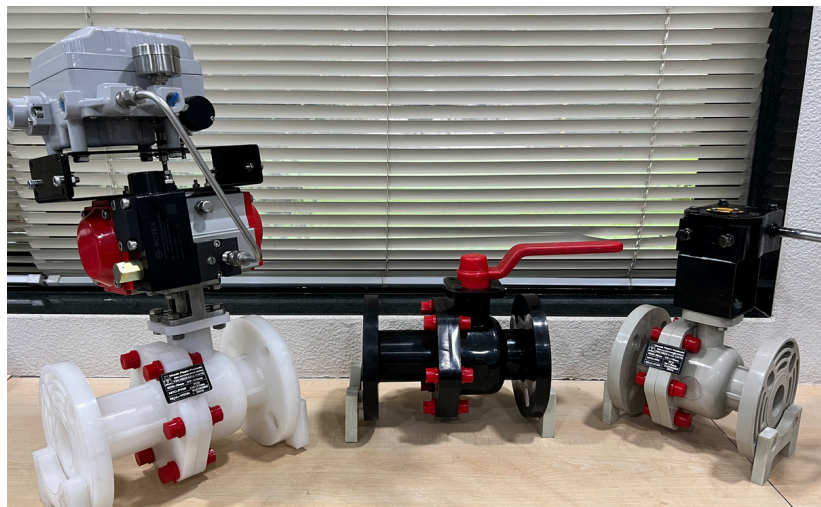


PLASTIC ABHIYANTA

COLD ROLLING MILL

VALVES

Plastic valves have revolutionized the handling and management of acids and chemicals in industrial settings, offering a range of advantages over traditional metal counterparts in terms of efficiency, durability, and safety. These specialized valves, constructed from high-grade engineering plastics such as polyvinyl chloride (PVC), polypropylene (PP), polytetrafluoroethylene (PTFE), or fluorinated ethylene propylene (FEP), are meticulously engineered to withstand the harsh and corrosive nature of acids and chemicals.



EDGE PROTECTOR

Plastic coil edge protectors serve as indispensable guardians in the transportation and storage of coiled materials, safeguarding against damage and preserving the integrity of the goods. These specially designed protectors, crafted from durable and impact-resistant plastics, encase the edges of coiled materials, shielding them from abrasions, impacts, and deformation during handling, storage, and transit. Their robust construction and tailored design provide a cushioned barrier, preventing edge-to-edge contact, thus averting potential harm or distortion to the coiled products. With varying sizes and configurations to suit different coil diameters and materials, these plastic edge protectors ensure the safe and secure transport of coiled goods, minimizing product damage, reducing waste, and upholding the quality of the materials throughout the supply chain.



PLASTIC ABHIYANTA

COLD ROLLING MILL

PRESSURE PAD

Pressure pads in cold rolling mills are pivotal components designed to ensure precision and control during the rolling process. These specialized pads, often constructed from high-quality materials as composite engineering plastics, exert controlled pressure onto the steel strip being processed. Their primary function is to regulate the uniformity of the strip's thickness and surface quality by applying consistent pressure across the width of the material. By mitigating variations and maintaining even pressure distribution, these pads help in achieving the desired dimensional accuracy and surface finish of the cold-rolled steel. Their ability to withstand extreme pressures, coupled with their durability and resilience, ensures reliable performance, contributing significantly to the efficiency and quality standards of the cold rolling mill operation.

SADDLE PAD

Iron coil resting plastic pads combine the durability of High impact polymer with the flexibility of coils embedded within a sturdy plastic framework. These pads are engineered to provide robust support and enhanced comfort in various applications, from industrial settings to equestrian use. The incorporation of high impact plastic offers resilience and stability, while the coil resting technology ensures weight distribution and adaptability.

ACID AND CHEMICAL RESISTANT COMPONENTS

Engineering plastics have revolutionized the manufacturing of acid and chemical-resistant components, standing as a testament to their exceptional durability and reliability in corrosive environments. These specialized plastics, crafted to withstand the harsh effects of acids and chemicals, offer a unique blend of properties like high chemical inertness, superb mechanical strength, and resilience to extreme temperatures. These materials not only safeguard against corrosion but also contribute to enhancing operational efficiency and safety in environments where resilience to chemical aggression is paramount.



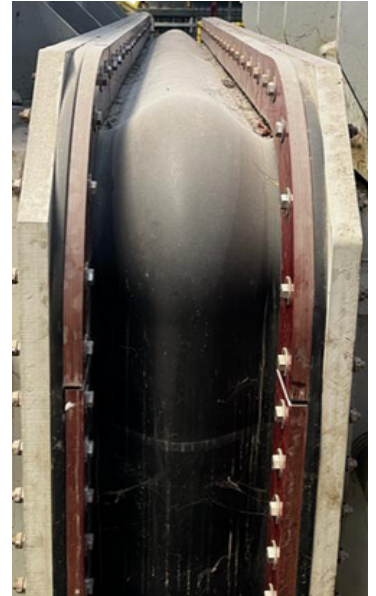
PLASTIC ABHIYANTA

COLD ROLLING MILL

RUBBER BELLOW

Rubber, a versatile and resilient material, holds a ubiquitous presence across countless industries and everyday applications. Its natural elasticity and durability make it invaluable in manufacturing processes, from automotive components to household products. Beyond its industrial uses, rubber's flexibility and shock-absorbing properties find applications in footwear, sports equipment, and even medical devices. From soft, pliable forms to sturdy compounds, rubber's adaptability allows it to serve a wide array of purposes, showcasing its significance in modern society's functionality and innovation.

Bakelite components can also be supplied.

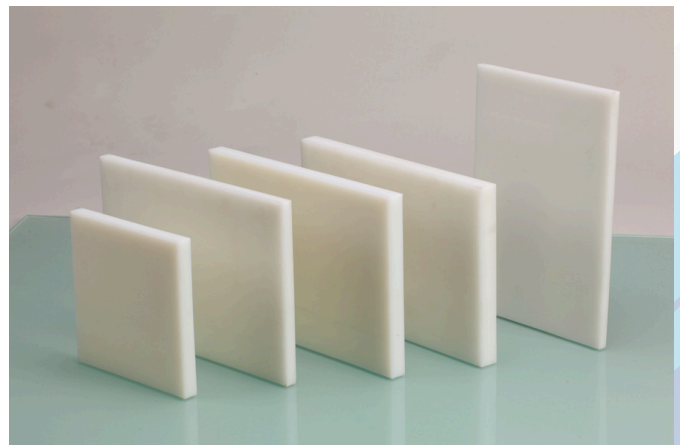


TONG LINER

Crane tong liners crafted from engineering plastic represent a cutting-edge solution in heavy machinery operations. These specialized liners, engineered from high-performance engineering plastics, exhibit exceptional durability, resilience, and low-friction characteristics. They're meticulously designed to withstand the rigours of lifting heavy loads, offering superior protection to crane tongs and the materials being handled.

WEAR RESISTANT LINER

Wear-resistant engineering plastic liners stand as a pinnacle of durability and reliability in various industrial applications. These liners, crafted from high-grade engineering plastics boast exceptional resistance to abrasion, corrosion, and harsh chemicals.



PLASTIC ABHIYANTA

COLD ROLLING MILL

ANULON IN PLTCM

Engineering plastics play a crucial role in the Pickling Line Tandem Cold Mill (PLTCM) and CRM areas of an iron and steel plant, where they are used for their excellent wear resistance, chemical resistance, and self-lubricating properties. The high-performance Anulon range are commonly utilized in components like guide rollers, wear strips, seals, and bearings to reduce friction, enhance durability, and withstand harsh chemical environments during pickling and rolling processes. In PLTCM, engineering plastics help improve conveyor efficiency and minimize damage to steel strips, while in CRM, they contribute to reducing downtime by offering superior impact resistance and reducing metal-to-metal contact. Their lightweight nature also aids in energy savings, making them an essential material for modern steel manufacturing processes.

The DRA is a crucial component in the PLTCM of an iron and steel plant. It is primarily used in the pickling section to control the flow of acid and prevent excessive spillage or splashing, ensuring efficient cleaning of the steel strip while minimizing wastage and corrosion. The DR acts as a barrier, maintaining the correct level of pickling solution and guiding the strip smoothly through the bath.

- **Chemical Resistance:** Withstands aggressive acids like hydrochloric acid used in the pickling process.
- **Wear Resistance:** Reduces material degradation due to continuous strip contact.
- **Self-Lubrication:** Minimizes friction and improves operational efficiency.
- **Lightweight and High Strength:** Reduces the overall load on the system, leading to energy savings.
- **Corrosion Resistance:** Prevents rusting and degradation, ensuring longer equipment life.

GUIDE RINGS & ASSEMBLY

Guide Rings are critical components used in the Pickling Line Tandem Cold Mill (PLTCM) and Cold Rolling Mill (CRM) of iron and steel plants. They are primarily used in tension levelers and bridles to guide and maintain proper tension in steel strips during processing. These rings are subjected to continuous high-speed contact with moving metal strips, requiring high wear resistance and low friction materials to ensure smooth operation.

PLASTIC ABHIYANTA

STEEL MELTING SHOP

ANULON IN SMS

Engineering plastics play a vital role in the Steel Melting Shop (SMS) by enhancing durability, reducing friction, and providing resistance to high temperatures and chemical exposure. Materials like UHMWPE, PEEK, PTFE, and Nylon are used in slide gates, ladle shrouds, sealing rings, wear pads, insulation components, and conveyor systems to ensure smooth operations. These plastics offer self-lubrication, high wear resistance, and thermal stability, reducing maintenance downtime and improving efficiency in handling molten steel, slag, and refractory systems. Their lightweight and corrosion-resistant properties make them essential for enhancing the longevity and reliability of SMS equipment.

INSULATING WASHER & SLEEVES

In a steel plant, the insulating washer and sleeve play a crucial role in the roof cooling circuit of high-temperature zones, such as the Steel Melting Shop (SMS) and Continuous Casting Machine (CCM). These components act as electrical and thermal insulators, preventing unwanted heat transfer and electrical conduction between metallic parts in cooling pipelines and water circuits. Typically made from high-performance engineering plastics, they ensure efficient cooling system performance while protecting critical structures from thermal expansion and electrical faults.

By integrating insulating washers and sleeves in the roof cooling circuit, steel plants achieve better thermal management, reduced energy loss, and increased equipment life, ensuring smooth and efficient operations in high-temperature areas.

SLIDING GATE SEALS AND BUSHINGS.

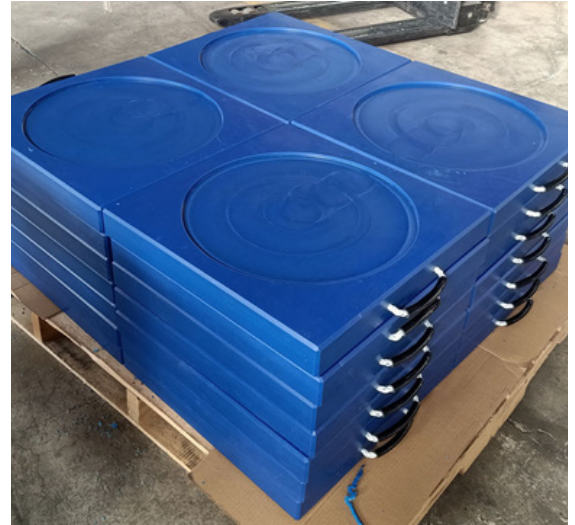
Slide gate plate seals and bushings are essential components in ladle and tundish slide gate systems in a Steel Melting Shop (SMS). These parts ensure the controlled flow of molten steel by providing a tight seal and reducing friction between moving plates. Traditionally, metal-based materials were used, but the Anulon range of engineering plastics has revolutionized their performance. These materials offer exceptional wear resistance, self-lubrication, and high-temperature stability, making them ideal for the extreme conditions of steelmaking. Anulon seals prevent leakage of molten metal, ensuring smooth operation with minimal maintenance, while Anulon bushings provide impact resistance and reduce operational stress on mechanical parts. The use of the Anulon range in slide gate plate seals and bushings enhances durability, efficiency, and safety, significantly extending the life of critical components in high-temperature steel pouring systems.

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OTHER PRODUCTS

OUTRIGGER PADS

Outrigger pads are essential accessories in industries reliant on heavy machinery and equipment. Crafted from durable material, these pads serve as stabilizing platforms, distributing the weight of cranes, aerial lifts, or utility vehicles over a larger surface area. Their robust construction ensures they can withstand immense pressure and varying environmental conditions, preventing machinery from sinking into soft or unstable ground.



STEAM CURTAINS

Steam curtains play a vital role in maintaining a controlled environment within an iron and steel plant. These curtains, are transparent and can sustain temperature upto 110°C, allowing user to get partial view on the machine and serve as effective barriers against steam in various stages of steel production. They help regulate temperature, contain dust and pollutants.

OVER HEAD CRANE LOOKOUT GLASS

ANULON 122 lookout glass is a type of safety glass that is made from a thermoplastic material. It is often used in applications where safety is a major concern, such as in cranes. ANULON 122 is 250 times more impact-resistant than glass, making it a good choice for applications where there is a risk of breakage. The material is half the density of Glass and is a very strong and durable material that is resistant to impact and breakage. It is also lightweight and easy to install. These properties make it an ideal choice for a variety of applications where safety and durability are important.

ROOFING

Anulon 122 roofing stands as a symbol of innovation in construction materials. Renowned for its durability, transparency, and versatility, Anulon 122 sheets redefine traditional roofing solutions. Their unique composition allows them to endure extreme weather conditions while welcoming natural light into spaces, casting a gentle, diffused glow. Suitable for both residential and industrial use, these sheets offer a harmonious balance of lightweight design and robustness, making them a cornerstone in modern roofing systems. The integration of Anulon 122 elevates architectural designs, marking it as a preferred choice that combines functionality with aesthetic appeal.

PLASTIC ABHIYANTA

ANULON RANGE OF PRODUCTS

The following materials are also available with us and can be shaped into your requirement

- NYLON (PA)
- CAST NYLON
- CAST NYLON (OIL IMPREGNATED)
- PTFE/ TEFLON
- RIGID PVC
- SOFT PVC
- UHMWPE
- HMHDPE
- HDPE
- ACRYLIC (PMMA)
- POLYCARBONATE (PC)
- POLYPROPYLENE (PP)
- PP (HIGH TEMP)
- POM / DELRIN
- BAKELITE / HYLAM
- POLYURETHANE (PU)
- PET
- PVDF
- PEEK
- PVC CURTAIN
- LDPE
- LLDPE
- ABS
- PS
- GRP / FRP
- EVA

- RUBBER
 - VITTON
 - NEOPRENE
 - NATURAL
- & OTHERS



PLASTIC ABHIYANTA

FACILITY AT PLASTIC ABHIYANTA



At Plastic Abhiyanta, our tool room stands as a testament to precision engineering and technological prowess. Boasting an impressive array of both conventional and non-conventional machines, we merge traditional craftsmanship with cutting-edge innovation. Our tool room is a hub of versatility, equipped with an assortment of machinery that caters to diverse production needs, ensuring we meet and exceed industry standards. What sets us apart are the two Italian high-accuracy CNC machines that stand as the crown jewels of our facility, elevating our capabilities to craft intricate, flawless components with unmatched precision. These CNC machines embody the pinnacle of engineering excellence, enabling us to produce complex parts with exacting detail and unparalleled accuracy. At Plastic Abhiyanta, our tool room is not just a space; it's a testament to our commitment to delivering excellence and pushing the boundaries of what's achievable in plastic engineering.

NOTES

PLASTIC ABHIYANTA

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700072

OTHER OFFICES

DIAMOND HERITAGE, KOLKATA
BISHNUPUR, KOLKATA

WORKS

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GLT ROAD, KOLKATA
RAJARHAT, KOLKATA
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ANULON[®]

RANGE OF ENGINEERING PLASTICS

TSL VENDOR CODE : PA 58
REGISTERED ON Ariba AND OTHER PLATFORMS