

Alternate Solid Fuels (AltSF) Co-processing for energy recovery



Complete
turnkey Solution
By AltSF Process Pvt. Ltd.



About Us

UNIT – 1, Chikhali Pune
Amane Engineers/AltSF Process

Factory Area : 1,500 m2
Open Area : 8,000 m2
Office area : 240 m2



UNIT – 2, Waki, Chakan, Pune
Amane Engineers

Factory Area : 9,180 m2
Office area : 580 m2



UNIT – 3, Pisoli, Pune
Amane Engineers/Sai sounds

Factory Area : 900 m2
Office area : 180 m2



In-house Capability

- ✓ In-house Laser cutting, CNC Bending machines
- ✓ In-house CO2 welding machines with qualified welders
- ✓ More than 100 skilled workers & 10 supervisors
- ✓ ISO 9001:2015 certified factory
Certificate ID: IS/2202AN/4135
- ✓ Bridge crane as well as mobile cranes: providing material handling flexibility in workshop
- ✓ In-house Sand blasting, painting & powder coating facilities





AltSF CO-PROCESSING : Stages

AltSF Storage Management

AltSF Uniform Extraction

AltSF Accurate Weighing

AltSF Uninterrupted Conveying

Safe & efficient introducing in Kiln/Calciner

Safety equipment

AltSF Storage Management

AFR Starter kit (< 5 TPH)



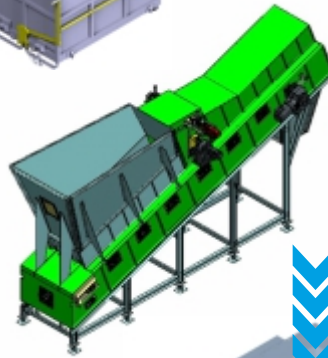
High speed Hoist

Container (2 m³)
(Double valve with refractory safety gate)



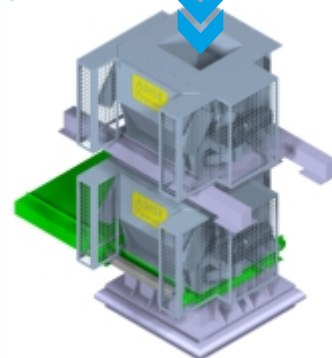
Container

Easy bottom opening



DosiFEED

Recommended to install in PHT



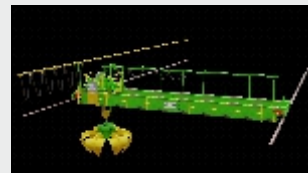
CalFEED

(Double valve with refractory safety gate)

Feeding to calciner

Grab crane: for more than 500m³ volume storage

- ✓ Automated / Manual grab crane is best solution for higher storage management
- ✓ Flexibility for handling various moisture RDF, TDF, Biomass
- ✓ Flexibility for handling various grain size of RDF, TDF, Biomass
- ✓ Less power consumption, reduction on manual handling by front loader
- ✓ Reduction in truck movement in factory
- ✓ Less area requirement, for more volume as we can manage storage for upto 10m in height
- ✓ Disadvantage: dead stock of about 5 to 10%



Grab Crane Working





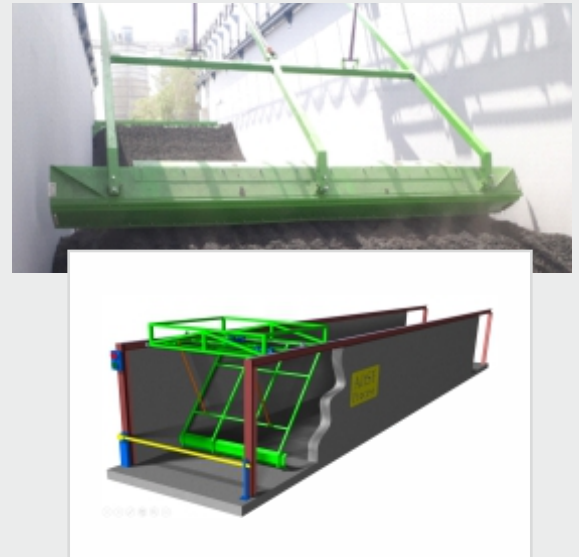
LadderFEED (for more volume holding)



- ✓ Hydraulically operated ladders, pulls the AF on to next conveyor, periodically.
- ✓ Rugged design with negligible wear and tear capable for 200 m³/h OR 20tph.
- ✓ Requires chain belt conveyor for uniform material extraction.
- ✓ Direct truck loading on the ladder is feasible provides easy unloading. Full automated operation, with Red-Green signal and boom barrier for loading.
- ✓ Number of LadderFEED's can be installed in a line and all can feed into single chain belt conveyor.
- ✓ Grain size got some limitation and it can handle up to 100mm grain size only.

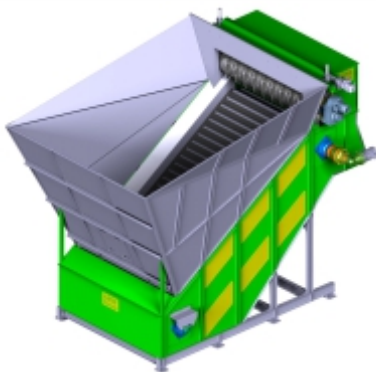
ScrappFEED (for more volume holding about 500m³)

- ✓ Strong bucket for scrapping the Alternate fuels and feeding to next chain conveyor.
- ✓ Rugged design with negligible wear and tear capable for 100 m³/h OR 10tph.
- ✓ Requires chain belt conveyor for uniform material extraction, as the scrapping is a cyclic activity of extraction.
- ✓ Direct truck tippler able to load on floor in the on the bunker. Fully automated operation, with Red-Green signal and boom barrier for loading.
- ✓ Number of ScrappFEED's can be installed in a line and all can feed into single chain belt conveyor.
- ✓ Grain size got some limitation and it can handle up to 50mm grain size only.



AltSF Uniform Extraction

HoppFEED (for effective extraction)



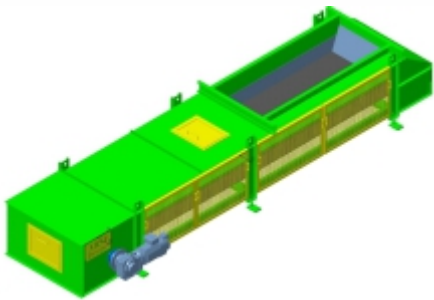
- ✓ Synchronized with the dosing belt to control feeding as required
- ✓ Rugged design with high hopper capacity of up to 30 m³
- ✓ Accepts material from tippler truck, front loader, garb crane directly.
- ✓ Regulating drum and regulating foil is provided to ensure uniform output discharge
- ✓ Feeding capacity of up to 400 m³/h
- ✓ Radar sensor, jam sensor, proxy sensors, zero speed switch provides it necessary process control along with Siemens standards PLC system



HoppFEED (for effective extraction)



AltSF Accurate Weighing



- ✓ Wide entry feed chute, allowing more wide HoppFEED to load into small wide WeighFEED
- ✓ Rugged design with high strength rollers & pulley capable for 400 m3/h
- ✓ Siemens system with weighing rollers & PLC for accurate control
- ✓ Complete automation with Siemens latest PLC system
- ✓ Integration with HoppFEED for controlled & uniform dosing

WeighFEED (for accurate dosing)



WeighFEED weighing tests for each dispatch

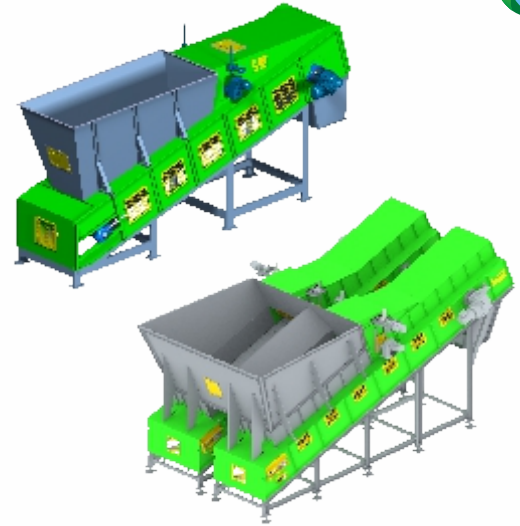


- ✓ 100% assembly set up for each dispatch for complete inspection
- ✓ Complete panel power on & tests
- ✓ Error free installation on site
- ✓ All software's upload & tests
- ✓ Simulation of site conditions
- ✓ Test weights for workshop checks



DosiFEED (for compact extraction & dosing)

- ✓ Compact design with hopper & dosing arrangement
- ✓ Rugged design hopper capacity of 7 m³
- ✓ Regulating drum and regulating foil is provided to ensure uniform output discharge.
- ✓ Special weighing bridge designed for accurate weighing & dosing based on core siemens support.
- ✓ Feeding capacity of up to 300 m³/h
- ✓ Complete automation with process sensors and PLC for efficient & safe control



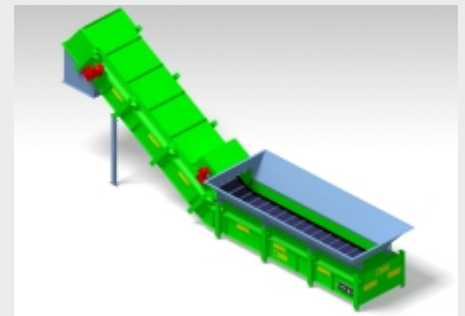
AltSF Uninterrupted Conveying

Conveying – most flexible equipment

Chain Belt conveyor

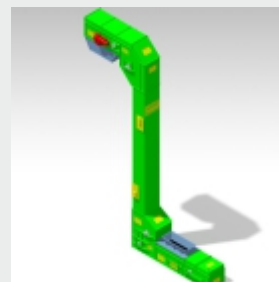
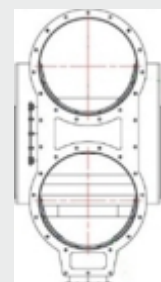
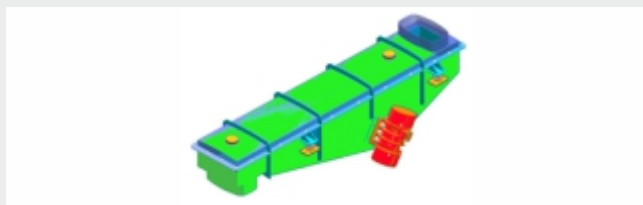
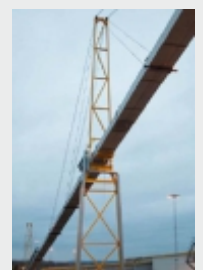
Belt conveyor

Metallic apron conveyor



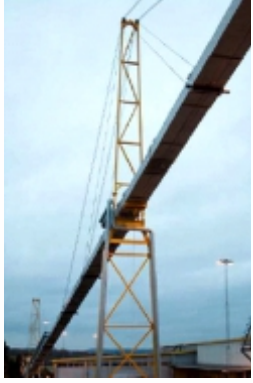
Conveying – less flexible equipment

- ✓ Troughed Belt conveyor
- ✓ Side walls vertical belt conveyor
- ✓ Bucket elevator (specific)
- ✓ Belt pipe conveyor
- ✓ Air supported belt conveyor
- ✓ Enclosed vibrating conveyor

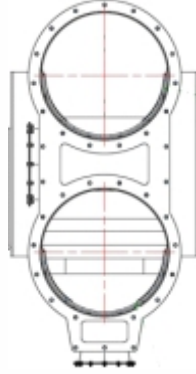




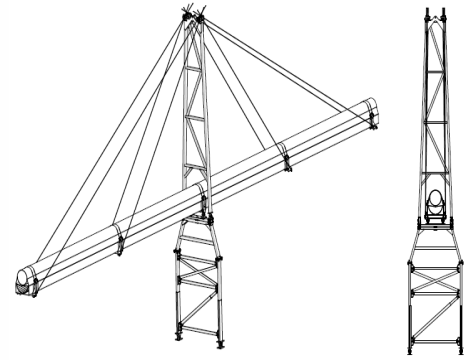
AbcFEED: Air supported Belt Conveyor



Blower arrangement for belt lifting



Two standard pipe structure for higher speed of 2.5 m/s

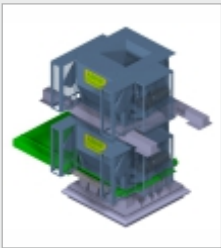


Long distance support up to 50m

AltSF Safe & efficient feeding into calciner / kiln

CalFEED

(Double valve airlock with pneumatic refractory safety shut off gate)

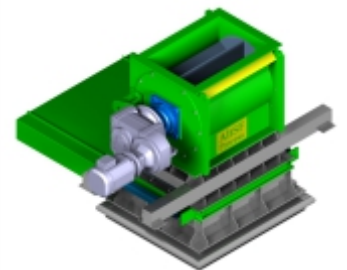


- ✓ Compact and accommodative design for material of higher particle size and moisture content
- ✓ Spring action technology to avoid system tripping or motor overload at minor blockages
- ✓ Electrically operated system with minimal cycle time
- ✓ Unique cam arrangement for quick flap closing and shuddering action to ensure self cleaning of flaps.
- ✓ Safe operation with high grade steel and safety gate for isolation of the system
- ✓ Internal refractory lining for safeguarding against up to 1400 degree temp.
- ✓ Safety gate provided with refractory as well as air receiver tank and panel, for quick action even in case of plant air is not available

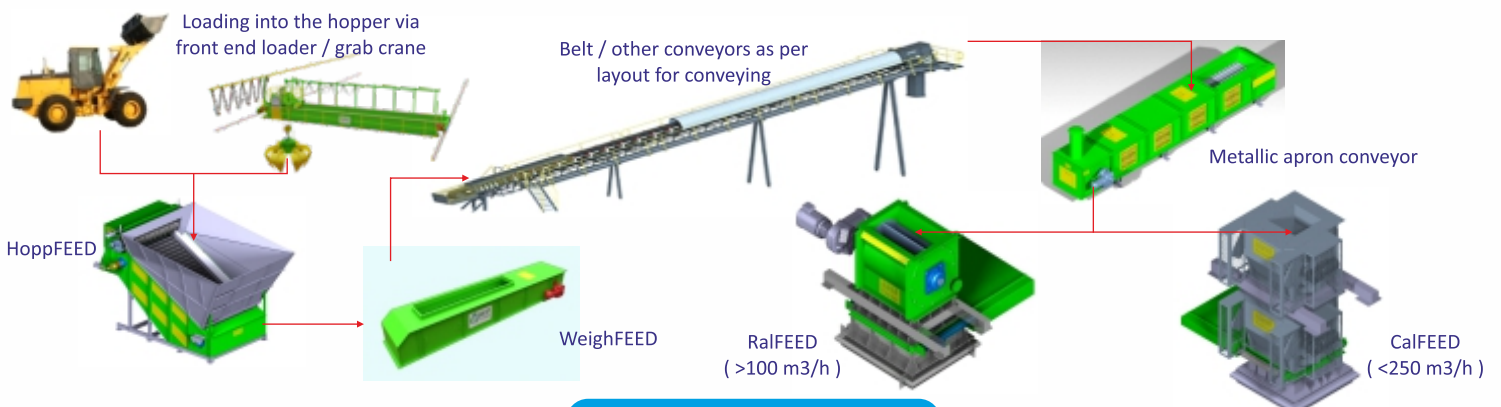
RalFEED

(Rotary valve airlock with pneumatic safety gate)

- ✓ Handling capacity of 400 m³/hr (up to 60 tph)
- ✓ Continuous and smooth feeding of material to the calciner
- ✓ Equipped with counter knives for cutting through long ribbon type material
- ✓ Compact and accommodative design for feeding at higher capacity
- ✓ Safe operation with high grade steel and safety shut-off gate for isolation of system
- ✓ High torque rotor for cutting force



Flexible Co-processing system (most accepted)



Training & Services

we serve differently



positive user experience



customization & support

Global References

**DANGOTE
CEMENT**

Dalmia
Bharat Cement

JSW

**KAMAL
CEMENT** SHREE DIGVIJAY
CEMENT CO. LTD.

**THERMAX
THERMAX
LIMITED**



SHARJAH CEMENT
FACTORY

JKCement

**SAGAR
CEMENT**

**UltraTech
CEMENT**
The Engineer's Choice

adani

ACC



SENEGAL

NIGERIA

REPUBLIC OF
THE CONGO

UNITED ARAB
EMIRATES

INDIA

Many systems for ASF feeding
with 10 to 60tph capacity



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