Doppstadt

REFUSE-DERIVED FUELS

APPLICATIONS

Screen oversize prior to wind sifting

TREATMENT OF REFUSE-DERIVED FUELS

Refuse-derived fuels (RDFs) are fuels derived from waste that can replace primary fuels in the thermal processes of the primary industry or in the energy generation sector.

Refuse-derived fuels can be distinguished into two categories based on the amount of processing they require:

CATEGORY 1: types of waste that are initially recovered as a mono-fraction and can be sent for co-incineration without major treatment measures.

CATEGORY 2: high-calorific waste streams from commercial waste pre-treatment plants, LVP sorting plants etc., high-calorific fraction after mechanical and aerobic/anaerobic biological treatment.

The materials processed by our systems come predominantly from the second category:
Household-type commercial and, production-specific commercial waste, residual industrial and commercial waste, construction waste, bulky waste or sorting residues.

THIS IS DOPPSTADT

Headquartered in Velbert, Germany, the Doppstadt family firm was founded in 1965. While the company has its origins in developing agricultural machinery, Doppstadt today is a leading, globally active solutions and services provider in all areas of recycling/environmental technology and recyclables extraction.

"Best Solution. Smart Recycling." – With this as our guiding principle, we combine proven processes to create customised end-to-end solutions characterised by innovative processes, optimum efficiency, and maximum cost-effectiveness. Particularly in the areas of water-based separation systems and wet recycling, we impress our customers by providing flexible systems to tackle every challenge. With locations in Velbert, Wülfrath, Calbe, and Wilsdruff, Germany, we serve customers in more than 40 countries through our own dealer network and offer comprehensive services for every product in Doppstadt's unique portfolio.

At a glance:

- Household-type commercial waste
- production-specific commercial waste
- residual industrial and commercial waste
- construction waste
- bulky waste
- sorting residues

REFUSE-DERIVED FUELS

Produced with different extents of treatment.

OUTPUT < 30 mm
Suitable material for SRF
main burners
Particle size < 30 mm
High specific properties

EXAMPLE SYSTEM
Shredder -> ferrous metal separator -> screener -> wind sifter -> grinder

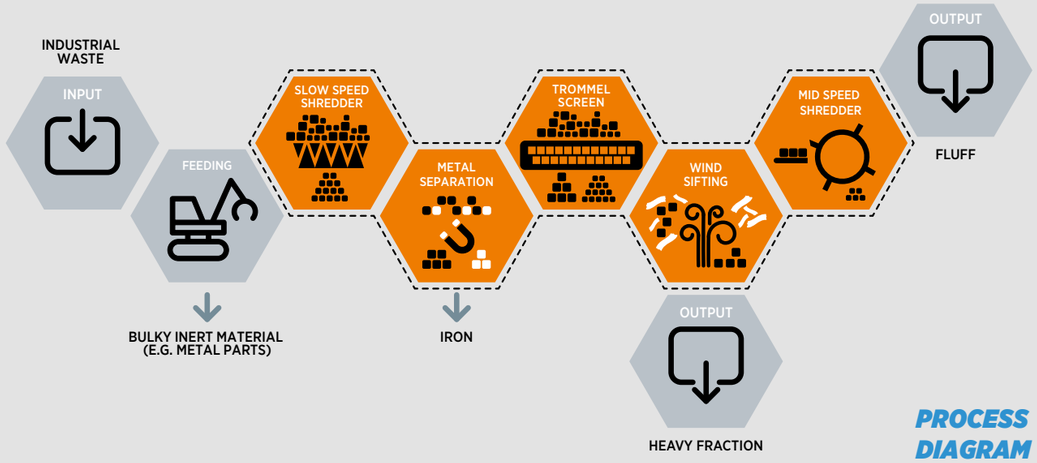
OUTPUT < 100 mm
Suitable material for RDF calciner
Particle size < 100 mm
Low specific properties

EXAMPLE SYSTEM
Shredder -> ferrous metal separator -> screener -> wind sifter -> grinder

OUTPUT < 300 mm
Refuse-derived fuel for power plants
< 300 mm
Low quality

EXAMPLE SYSTEM
Shredder -> ferrous metal separator

TREATMENT OF REFUSE-DERIVED FUEL PROCESS OVERVIEW



PROCESS DIAGRAM

SLOW SPEED SHREDDER

SHREDDING

STEP 1: Untreated commercial, industrial and household waste are fed into the shredder by a hydraulic grab arm or wheel loader.

TROMMEL SCREEN

SCREENING

STEP 3: Our screeners screen out fine particles to achieve the highest material quality. The cut point is adjusted specifically for the task at hand.

METAL SEPARATION

MAGNET

STEP 2: Ferromagnetic parts are separated by means of an overband magnet.

MID SPEED SHREDDER

MID SPEED SHREDDER

STEP 5: The high-quality material is then put through our AK, CURO and KIMO grinders to produce the desired end product. The output size of the material can be selected and changed by adjusting the screen size.

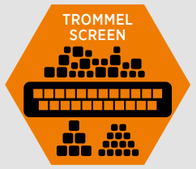
WIND SIFTING

WIND SIFTING

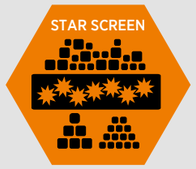
STEP 4: To improve material quality, the light and heavy fractions are once again separated using our wind sifter. The light material is separated from the heavy material by means of an air current. This provides a second cut point for the light fraction to be separated a second time.

GENERAL VIEW OF MACHINES

SHREDDING

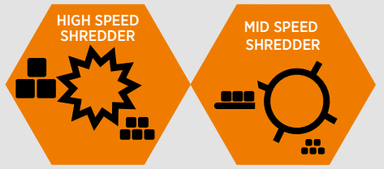


SEPARATION/SCREENING



SEPARATION/SCREENING

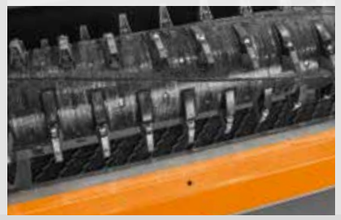
WINDSIFTING



GRINDING

MOBILE

SLOW SPEED SHREDDER LINE



TROMMEL LINE

FLATFLEX LINE

WINDSIFTER LINE

GRINDER / MID SPEED SHREDDER LINE

METHOR

INVENTHOR
INVENTHOR Type 6
INVENTHOR Type 9

518
518 FLEX

SM
SM 518.2
SM 620 Plus
SM 620 K Plus
SM 620 SA Plus
SM 720 SA Plus

SELECTOR
Selector 800.2
+
DST
Star screen deck

AIRFLEX
AirFlex 1500

AK
AK 315
AK 565
AK 565 K
AK 565 Plus
AK 640 K
AK 640 SA

STATIONARY

CERON
CERON Type 206
CERON Type 256
CERON Type 306
CERON Type 308

DW 2060 E

SM
SM 518 A
SM 518 F
SM 620 A

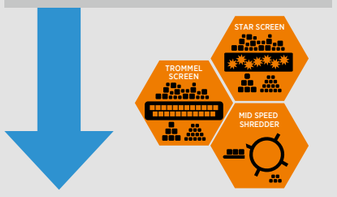
SST
SST 518
SST 720
SST 725
SST 1025
SST 1525

WS
WS 1001
WS 1501
WS 2001
WS 2501
WS 3001

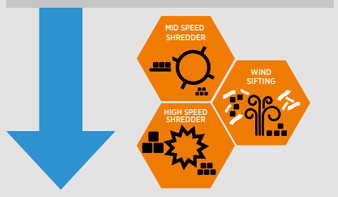
AK
AK 235 E
AK 440 VE
AK 540 VE
AK 640 VE
AK 640 L VE
NZ 180 VE

KIMO
KIMO Type 16
KIMO Type 20

CURO
CURO Type 250



Further processing



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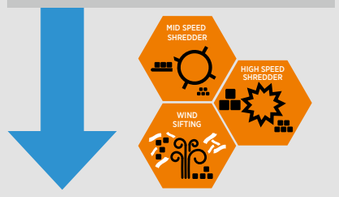

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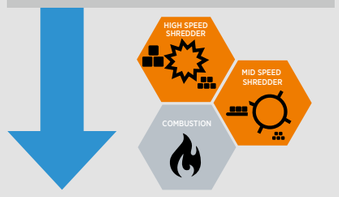

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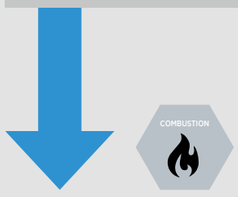

Further processing

Refuse-derived fuel treatment with Doppstadt means:

- Highest availability of the individual components guarantees the highest availability of the entire system
- Low-maintenance machines increase productivity in the long run
- Best quality shredding for optimal throughput and very economical costs

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