

Process and design

The increasing demand to reuse residues from steel plants leads to sophisticated solidification and granulation processes as well as the production of highly viscous suspensions. Materials from very different origins need to be homogenised by turbulent mixing processes to ensure the required consistency for the appropriate handling and metallurgical processing. However, apart from the mixing device, the appropriate design of feeding and dosing facilities for such mixing plants is of utmost importance. The differing conveying characteristics of the residues require a wide range of different conveying technologies. In the past econ industries have delivered systems for the reuse of typical residues such as blast furnace and converter dust as well as sludge from centrifuges and filterpresses. Most often the use of additives such as lime, coal dust or bentonite is beneficial to ensure the required product quality. At econ industries, the entire process technology can be developed individually with the customer by use of our existing pilot testing facility. Thus, econ industries is not only specialised in design and construction of the mixing technology itself, but also to engineer the customised peripheral equipment to deliver turn-key treatment units.



Key facts

Process technologies:	Customized process development together with client's metallurgists
Input material restrictions:	Almost none, coarse and abrasive input materials suitable
Output consistency:	Bulk material, granulated, briquets/pellets, suspensions
Equipment deliveries:	Mixers, receiving bunkers, silos, conveying/piping, control units
Optional process extensions:	Dosing equipment to melting ovens, exhaust vapour handling
Throughput capacity design:	Depending on process requirements up to 200 t/h; 24 hours/day
Design options:	To be built skid-mounted or in stationary execution

Greatest benefits of the steel plant residues recovery technology

- Turn-key solutions with highest flexibility for various incoming wastes, customized plant design
- Robust execution through single-shaft mixer design to prevent blockages and wear
- Exact adjustment of the humidity possible with intelligent measuring, dosing and control systems
- Fully encapsulated dust free processing incl. dust explosion protection
- Final feed material can be included by piping/pumping, bulk conveyors, containers, trucks, etc.
- Fully automated operation possible with process control from central control room
- Similar technologies can also be used for the non-ferrous melting processes

Imagine – **Zero** industrial waste ... !