

Crushing of Aluminium Die-Casting Scrap with Special Press-Shears

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When producing aluminum die-cast parts, beside OK parts, rejected parts are also produced as scrap, which must be shredded for internal recycling in the production process or external recycling. In order to avoid intermediate storage, internal and external transport, and contamination of the rejected parts, comminution should be carried out directly on site in the foundry.

With the use of ever larger die casting systems and correspondingly larger parts, the challenges of rapid, cost-effective on-site volume reduction and achieving ovenability are increasing. As a manufacturer of scrap processing systems for recycling companies, Oberländer Recycling Maschinen has gained relevant experience with aluminum scrap processing and can offer a compact, easy-to-use special shear-press for production companies. Compared to shredder systems on the market, this press has the advantage of generating less fine material and dust emissions. In addition, operation is simpler and there are lower operating and wear costs.



Pic. 1: Press loading of castings by forklift

The presses are a combination of cast crusher with shears. In a press chamber, the castings are broken as far as possible and fed to a cutting device located underneath on a discharge slider. The castings are charged from above, for example by forklift, with the broken material being discharged a few centimeters above the ground at the front. The broken material can be fed through a discharge chute into the customer's scrap bucket. Using a finger sieve installed on the chute discharge, fine particles can be thrown out

separately. The press is driven by an electric motor with directly flanged hydraulic pumps, which move the hydraulic cylinders via valves.

Compared to other processing systems, such as single or twin-shaft shredders, presses offer clear advantages.



Pic. 2: Complete press-shear installation with discharge chute

Shredding produces an increased proportion of small fractions, which leads to material loss in the subsequent melting process. Another problem arises when operating the shredders: on the one hand, an increased amount of dust is created, which makes an extraction system according to the latest European air restrictions necessary, and on the other hand, parts of material can be thrown out.

The press is very compact and available in different sizes, depending on the maximum edge length of the die-cast parts. Systems with 400 t and 250 t pressing force and working widths of 1.6 and 1.2 m are currently available. The systems are operated with an electric motor of up to 75 kW and have a shredding capacity of 1-4 t of aluminum die-casting per hour. Due to their small installation area of max. 2.5 x 12 m, they can be operated in production halls or outdoors..

Two typical press sizes are:

PS250 1250/800-55:

Drive power: 55 kW
max. edge length: 1.5 m
Pressing/shearing force: 250 t
Width of press box: 1.2 m
Machine dimension: 2x4.2x2.4 m

PS400 1600/800-75:

Drive power: 75 kW
max. edge length: 2.4 m
Pressing/shearing force: 400 t
Width of press box: 1.6 m
Machine dimension: 2.5x5.2x3.2 m



Pic. 3: Press-shear discharge with finger screen

Further information on request at info@Oberlaender-Recycling.de