

SHREDDER WEAR PARTS

Manganese Steel Shredder Hammers

Hadfield steel hammers for automobile and scrap shredders, solution treated for maximum toughness.



OVERVIEW

Shredder hammers take the most violent duty in a scrap yard. In an automobile shredder the hammer strikes car bodies, engine blocks and occasional unshreddable material at rotor speeds that leave no room for a brittle casting.

Melco casts shredder hammers in austenitic manganese steel to ASTM A128, solution annealed and water quenched so the carbides are in solution and the austenite is stable. The hammer arrives around 220 BHN and work-hardens past 500 BHN at the striking face within the first hours of operation.

We produce hammers for Wendt, American Pulverizer, Texas Shredder, Metso and Lindemann machines, from small pre-shredder hammers up to large mill hammers. Castings are supplied in weight-matched sets so the rotor stays in balance.

APPLICATIONS

- Automobile and ELV shredders
- Scrap metal shredding and recycling lines
- Hammer mills in metal recovery plants
- Wendt, American Pulverizer and Texas Shredder machines
- Metso and Lindemann shredder installations

KEY FEATURES

- ASTM A128 heat treatment - Solution annealed and water quenched in-house, the treatment that gives Hadfield steel its toughness.
- Work-hardening wear face - Strikes its way from roughly 220 BHN to over 500 BHN while the eye and body stay ductile.
- Weight-matched sets - Hammers weighed and paired so rotor balance is maintained across a full change-out.
- Piece weights to 2,000 kg - From small pre-shredder hammers to large mill hammers, cast on the same line.

MANUFACTURING SPECIFICATION

Parameter	Specification
Moulding	No-bake resin sand and green sand
Melting	Induction furnace, spectrometer-controlled
Piece weight	5 kg - 2,000 kg
Heat treatment	In-house, computer-controlled cycles
Dimensional control	Template and CMM check against drawing
Documentation	Chemical, hardness and dimensional report per heat

MATERIAL GRADES

Grade	Typical composition	Hardness	Suited to
ASTM A128 Grade A	1.05-1.35% C, 11.0-14.0% Mn	200-229 BHN as-cast, 500+ BHN work-hardened	Standard high-impact duty
ASTM A128 Grade B-3	0.9-1.05% C, 11.5-14.0% Mn	200-229 BHN as-cast, 500+ BHN work-hardened	Heavier sections, improved toughness
ASTM A128 Grade C	1.05-1.35% C, 11.5-14.0% Mn, 1.5-2.5% Cr	220-250 BHN as-cast	Where extra initial hardness is needed
ASTM A128 Grade E-2	0.7-1.3% C, 11.5-14.0% Mn, 1.8-2.1% Mo	200-229 BHN as-cast	Heavy sections, faster work-hardening

ENQUIRIES

Send a drawing, a sample or the machine model and we will confirm the fitment, recommend a grade and quote a firm price and delivery date.

Email: achandra@melcocastings.com

Phone: +91 98184 36295

Works: Plot No. F-1021, Industrial Area, Khushkhera, Bhiwadi, Alwar, Rajasthan 301019, India

Web: <https://www.wearcastings.com/products/manganese-steel-shredder-hammers>

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