SUHANI METACAST PVT. LTD.

Leading Manufacturers of Hi-Chrome and Hyper Steel Grinding Media Balls and Cylpebs

Mob: 9829092030 / 7568276608 / 9784790244

H.O.:C-4, New Colony, M.I.Road, Panch Batti 302001 Jaipur, India

UNIT 1- G1-8 RIICO Industrial Area BASSI , Jaipur, Rajasthan 302001
UNIT 2- Khasra No.1042, Behind Lotus Dai, RIICO Ind. Area BASSI, Jaipur, Rajasthan 303301
UNIT 3- Mojamabad, Ajmer Road, Jaipur, Rajasthan (In process)

E-mail: info@suhanimetacast.com | suhaniforging98@gmail.com

Website: www.suhanimetacast.com

SUHANI METACAST PVT. LTD.

MANUFACTURERS OF HI-CHROME AND HYPER STEEL GRINDING MEDIA BALLS

COMPANY PROFILE

◐ **Established Legacy:** Founded in 1997, Jaipur, India, Suhani Metacast Pvt. Ltd. brings over **28 years of expertise** in foundry and metallurgy, serving as a trusted partner to core industries.

◐ Specialized Manufacturer: **Leading producer of Hi-Chrome & Hyper Steel Grinding Media Balls and Cylpebs**, engineered for superior wear resistance, durability, and performance.

◐ Robust Capacity: Operating **two manufacturing units** in Jaipur with a combined **annual production capacity exceeding 6,000 MT**, ensuring consistent supply to domestic and international clients.

◐ **Quality & Compliance**: Certified under ISO 9001:2015 (Quality Management) and ISO 14001:2015 (Environmental Management), adhering to the highest standards of quality assurance and sustainability.

◐ **Advanced Infrastructure**: Equipped with modern induction furnaces, precision heat-treatment systems, and in-house chemical & mechanical testing labs, ensuring excellence from raw material to finished product.

◐ Strong Client Network: Supplying to **cement, mining, power generation, and mineral** processing industries across India, delivering products that improve grinding efficiency and reduce operational costs.

◐ **Commitment to R&D**: Focused on innovation and process improvement, with ongoing efforts to develop customized alloys and optimized grinding media solutions tailored to client requirements.

◐ **Future Vision Ready**: Expanding annual capacity to **18,000MT** with investment in **Full Automation** and a **High Pressure Moulding Line**.

1

SMC SUHANI METACAST

MAIN PRODUCTS

1. HYPER & HI-CHROME STEEL GRINDING MEDIA BALLS

Description	Hardness	Size Range (Balls)	Alloy Composition
Hi-Chrome Grinding Media	58-64 HRC	17 mm - 100 mm	Hi-Chrome Alloy Steel Balls
Hyper Steel Grinding Media	> 40 HRC	17 mm - 100 mm	Alloy according to IS 6079-1989

Catering to your grinding needs since 1997!

2

2. **HYPER & HI-CHROME STEEL CYLPEBS**

Description	Diameter x Length Sizes (mm)	Hardness	Standards	Heat Treatment	Size Tolerance
Hi-Chrome Steel Cylpebs	45x45, 40x40, 35x35, 25x25, 22x22, 19x19	58-64 HRC	Hi-Chrome Alloy Steel Cylpebs	Conducted to achieve required Hardness & Microstructure	± 1.50 - 2.0 mm for all cylpeb sizes
Hyper Steel Cylpebs	45x45, 40x40, 35x35, 25x25, 22x22, 19x19	> 375 BHN (as per IS 1500/1983)	IS 6079-1989	Conducted to achieve required Hardness as per requirement	± 1.50 - 2.0 mm for all cylpeb sizes

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

SMC SUHANI METACAST

CHEMICAL COMPOSITION

Hi-Chrome Steel Cast Grinding Media Balls (SMC)	Chemical Composition (%)							
	C	Si	Mn	Cr	P	S	Mo	Ni
	2.0-3.5	0.3-1.0	0.3-1.0	10.0-20.0	≤ 0.06	≤ 0.06	0.5 (Max)	0.5 (Max)

Hyper Steel Cast Grinding Media Ball (SMC)	Chemical Composition (%)					
	C	Si	Mn	Cr	P	S
	1.25-1.90	1.0 (Max)	1.20-1.50	1.5-2.5	≤ 0.1	≤ 0.06

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

Hi-Chrome Grinding Media

Hardness: When tested under a Rockwell Hardness testing machine, the hardness of the balls at any surface crossection point is between 58 HRC to 66 HRC depending on the alloy composition.
Chemical composition: The chemical composition of the Grinding Media is as per the application and user requirement.
Balls diameter (mm) – 125, 100, 90, 80, 75, 70, 65, 60, 50, 40, 30, 25, 20, 17, 15
Cylpebs (mm) – 45x45, 40x40, 35x35, 30x30, 25x25, 22x22, 19x19, 17x17, 15x15

Working Conditions	Low Abrasion Medium Impacts	Low Abrasion High Impact	High Abrasion High Impact	High Abrasion Low Impact	High Abrasion Low Impact	High Abrasion Low Impact
Application	First Chamber cement & raw mill	First Chamber cement & raw mill	First Chamber cement & raw mill	Second Chamber of cement raw mill and Coal mill	Second Chamber of cement raw mill and Coal mill	Second Chamber of cement raw mill and Coal mill
Cr %	14-18	14-18	18-22	10-14	11-15	16-20
Hardness (HRC)	58-62	60-64	61-65	59-64	60-65	60-65
Wear Resistant	Good	Good	Excellent	Excellent	Excellent	Excellent
C %	2.0-3.0	2.0-3.0	2.5-3.5	2.5-3.5	2.0-3.0	2.0-3.0
Impact resistance	Good	Excellent	Excellent	Low	Low	Low

Shape and size	Tolerance (mm)
(1) Balls of size 60 mm & above	+/- 2.50
(2) Balls of size 30 to 50 mm	+/- 2.00
(3) Balls of size 17 to 25 mm	+/- 1.50

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

SMC

Hyper Steel Grinding Media

Hardness: When tested in accordance with IS 1500/1983 the hardness at any point across the section of the ball is more than 375 BHN.
Chemical composition: The chemical composition of the Grinding Media will be as per IS 6079-1989.
Balls diameter (mm) – 125, 100, 90, 80, 75, 70, 65, 60, 50, 40, 30, 25, 20, 17, 15
Cylpebs (mm) – 45x45, 40x40, 35x35, 30x30, 25x25, 22x22, 19x19, 17x17, 15x15

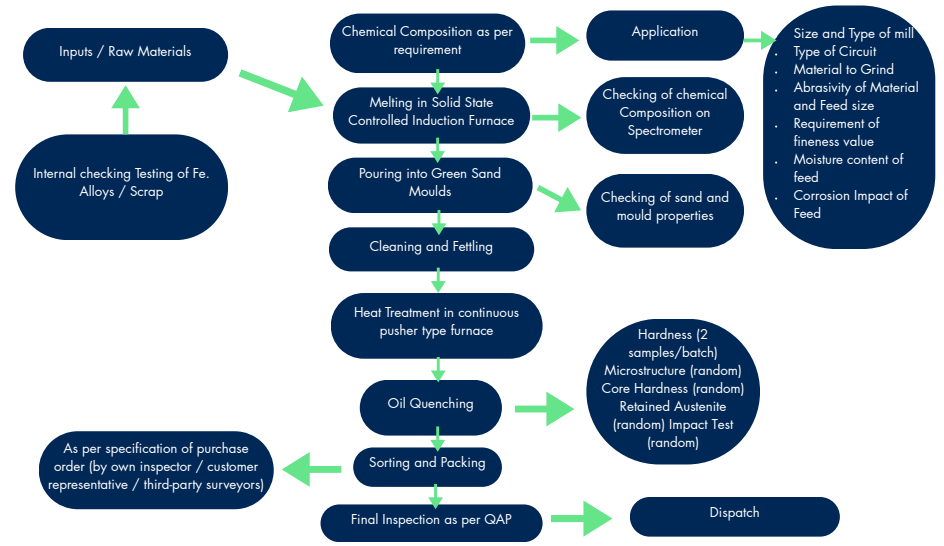
Metal	Grade 1 (For size 60 mm & above)	Grade 2 (For size below 60 mm)
Manganese	1.20-1.50	1.20-1.50
Silicon	1.00 (Max)	1.00 (Max)
Carbon	1.25-1.50	1.60-1.90
Chromium	1.50-2.00	1.50-2.00
Sulphur	0.06 (Max)	0.06 (Max)
Phosphorus	0.06 (Max)	0.06 (Max)

When it comes to precision, we never drop the ball!

Shape and size	Tolerance (mm)
(1) Balls of size 60 mm & above	+/- 2.50
(2) Balls of size 30 to 50 mm	+/- 2.00
(3) Balls of size 17 to 25 mm	+/- 1.50

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

SPECIFICATIONS/CASTING PROCESS



Suhani Metacast Product Advantage

Process	Quality Control
Raw Material	Sourced only from qualified suppliers; every batch undergoes rigorous inspection against internal specifications.
Melting & Casting	Induction furnaces and automated casting lines ensure accuracy; each batch is weighed, tracked, and inspected.
Heat Treatment	Advanced automated systems deliver optimum hardness and a uniform microstructure in every piece.
Spectro & Testing	Spectrometer, microstructure analyser, and hardness tester verify chemical composition and physical properties.
Experienced Workforce	Technical staff with decades of experience oversee operations, ensuring flawless execution and continual improvement.

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

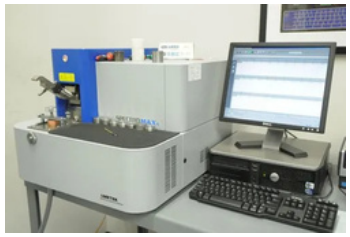
SMC SUHANI METACAST

OIL QUENCHING PROCESS

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

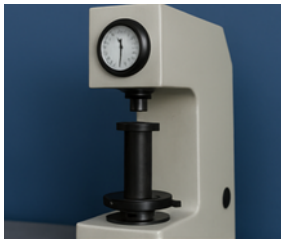
INSPECTION FACILITY

Inspection Facility	Purpose / Functionality
Spectrometers	Used for precise analysis of chemical composition ensuring correct alloy ratios (e.g., chromium content in Hi-Chrome and Hyper Steel).
Microstructure Analyzer	Examine internal structure for proper phase distribution (martensite + carbides) and absence of undesirable formations like continuous carbide networks.
Hardness-Testing Machines	Measure surface hardness (Rockwell or Brinell) to confirm final hardness levels (>60 HRC for Hi-Chrome, >375 BHN for Hyper Steel).



Spectrometer

Microstructure Analyzer



Hardness-Testing Machines

HONORS

Certification	Scope
ISO 9001:2015	Quality Management
ISO 14001:2015	Environmental Management

MAJOR MARKET

Mining Industry

Cement Industry

Thermal Power

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244

SMC SUHANI METACAST

OUR GRINDING SOLUTIONS

- Minimizing downtime is critical to efficient mining and industrial operations. That's why our grinding media is engineered for extended wear life and consistent performance.
- Every ore is unique — varying in geology, chemistry, and hardness. There's no universal solution. At Suhani Metacast, we customize alloy selection and grinding ball specifications to match your ore type and mill conditions, delivering the most cost-effective and durable results for every application.

Suhani Metacast's Solutions

- **Premium Foundation** – High-quality grinding media begins with carefully sourced raw materials.
- **Reliability at Every Step** – Trusted suppliers and skilled professionals ensure unmatched consistency.
- **Value-Driven** – Durable grinding balls, delivered at competitive prices.
- **Experience You Can Trust** – Decades of expertise power our tailored recommendations.
- **Guaranteed Quality** – Every ball meets the highest technical and quality standards.

Address: C-4, NEW COLONY, M.I.ROAD, JAIPUR Email: suhaniforging98@gmail.com Mob: 9829092030, 7568276608, 9784790244