



SHILIN CAST provides unrivalled casting solutions underpinned by exceptional service.

Our foundry division encompasses two engineering foundries located in the Gujarat's Rajkot. The facility boasts of one Green Sand Molding line and other with traditional hand molding.

The ARPA 300 LINE is suitable for medium-sized castings with a box size of 21 x 21 x 6 inches and a weight range of 10 Kgs to 40 Kgs bunch weight. On the other hand, the Hand Molding is ideal for larger castings, featuring a box size of 26 x 26 x 4 inches and a weight range of 35 kgs to 80 kgs bunch weight. Hand molding in casting provides flexibility and adaptability, making it ideal for unique or intricate shapes, quick prototyping, and small production runs.

Our engineering capabilities include:

CASTING GRADES

- Grey iron grades IS 210: 1978
- SG / Ductile iron grades IS 1083

CASTING SIZES

- ARPA mould sizes up to 21 X 21 inches and castings to 50Kg
- Hand mould sizes up to 26 x 26 inch and castings to 80Kg

CASTING TOLERANCES

- Near net shape and within CT9 tolerances

CORE MAKING

- Full in-house Susha Shell and Makewell cold box core making, coating and drying

FINISHING

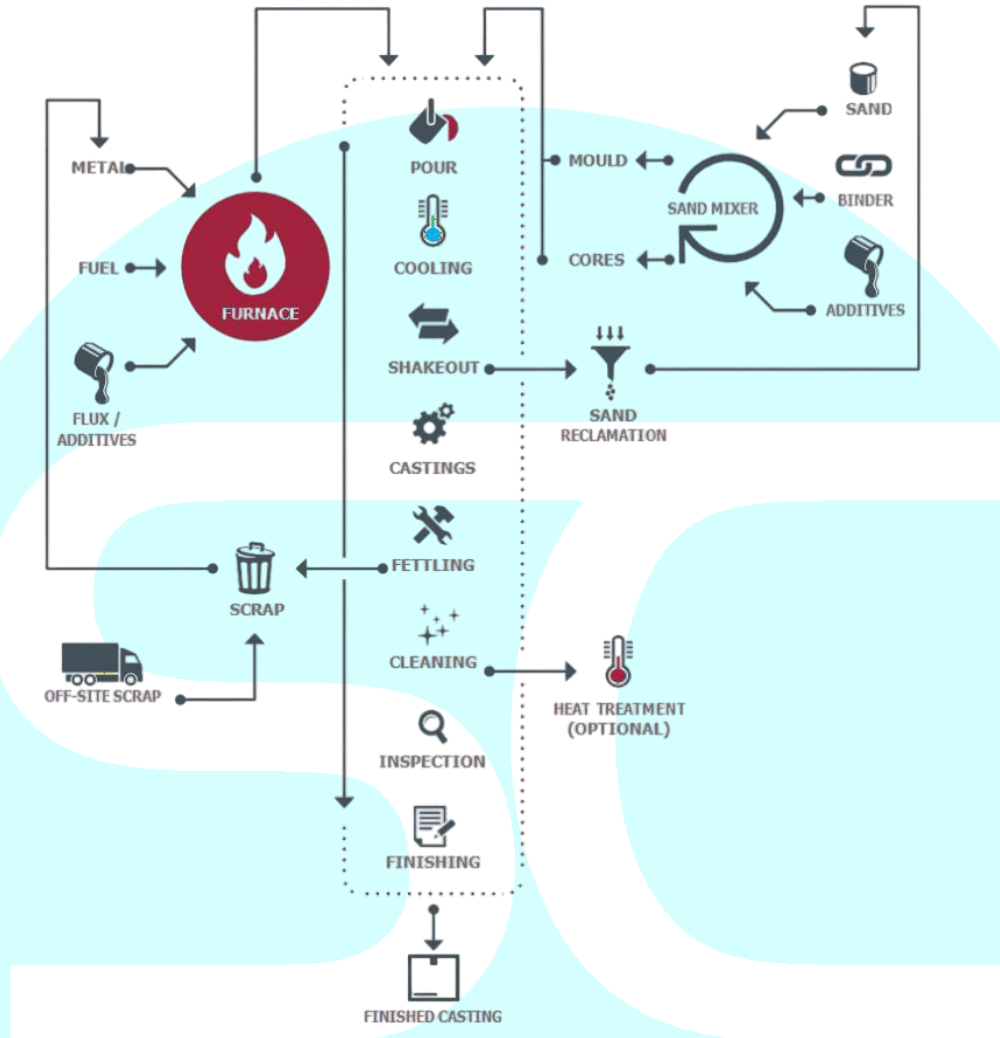
- Precision drilling, tapping and grinding
- Painting, coating,
- Bespoke packaging



THE CASTING PROCESS



SHILIN CAST has installed production capacity of 3600 tons per annum of good castings, cast iron and ductile iron put together. Our melting department consists of Two Cupola Furnace with melting capacity of 1300 kgs per hour each and One Induction Furnace with 300 kgs per hour melt rate.



Iron castings can be produced in a wide range of grades. These provide different strengths and performance characteristics for a diverse range of applications. Grades Manufactured currently are as follows:

GREY IRON GRADES IS 210: 1978

Grey iron is the most commonly used material and is typically specified where the need for stiffness is more important than tensile strength.

INTERNATIONAL SPECIFICATIONS FOR GREY IRON STANDARDS										
COUNTRY	SPECIFICATION	DESIGNATION	GRADE							
INDIA	IS 210 1978	FG	150		200		250		300	350
UNITED KINGDOM	BS 1452 1990	GRADE	150	180	200	220	250		300	350
USA	ANS/ASTM A48-83	CLASS	20A	25A	30A		35A	40A	45A	50A
DIN	DIN EN 1561	EN-GJL	150		200		250		300	350
GERMANY	DIN 1691 1985	GG	15		20		25		30	35
FRANCE	NFA 32-101-1987	FGL	150		200		250		300	350
ITALY	UNI 5007 1969	G	15		20		25		30	35
JAPAN	JIS G5501 1981	FC	150		200		250		300	350
RUSSIA	GOST 1412 1979	SCH	15	18	20		25		30	35
INTERNATIONAL	ISO 185-1988	GRADE	150		200		250		300	350
		CLASS	2		3		4		5	6
Tensile Strength MPA			150 MIN		207 MIN		242 MIN		300 MIN	350 MIN
Hardness Range BHN			136-167		159-194		180-222		202-247	227-278
Total Carbon %			3.4-3.6		3.2-3.5		3.15-3.30		2.9-3.1	3.1 Max
Silicon %			2.2-2.5		2.0-2.5		1.6-1.9		1.8-2.0	1.4-1.6
Manganese %			0.5-0.7		0.6-0.8		0.6-0.8		0.7-0.9	0.7-0.9
Sulphur %			0.15		0.15		0.12 Max		0.10 Max	0.10 Max
Phosphorous %			0.9-1.2		0.4 Max		0.3 Max		0.10 Max	0.10 Max
Molybdenum %										0.3-0.5
Cu or Ni %									0.3-0.5	1.0-1.5

Note: The above standards for ordering reference only the customer can specify any special requirement. All specifications are subject to change without prior notice.



DUCTILE IRON / SG IRON GRADES IS 1083

Ductile or SG iron is more impact and fatigue resistant than grey iron and is used in applications that require harder wearing castings.

INTERNATIONAL SPECIFICATIONS FOR DUCTILE (NODULAR /SPHEROIDAL IRON)								
COUNTRY	SPECIFICATION	DESIGNATION	GRADE					
INDIA	IS 1083	SG	400/12	400/18	400/18 LT	500/7	600/3	700/2
UNITED KINGDOM	BS 2789:1985		420/12	400/18	400/18	500/7	600/3	700/2
USA	ASTM A536	GRADE	65-45-12	60-40-18	60-40-18	80-55-06	80-60-03	100-70-03
DIN	DIN EN 1563	EN-GJS	400-12	400-18(RT)	400-18(LT)	500-7	600-3	700-2
GERMANY	DIN 1693-1973	GGG	400-12	400-18	--	500-7	600-3	700-2
FRANCE	NF A 32-201:1976	FGS	400/12	370/17	370/17	500/7	600/3	700/2
ITALY	UNI 4544:1979	GS	400/12	370/17	370/17	500/7	600/3	700/2
JAPAN	JIS G5502:1982	FCD	(40)392/12	(37)363/17	(37)363/17	(50)490/7	(60)588/3	(70)686/2
INTERNATIONAL	ISO 1083:1976		400/12	370/17	370/17	500/7	600/3	700/2
Tensile Strength Mpa			448 MIN	414 MIN	414 MIN	552 MIN	600 MIN	689 MIN
Yield Strength Mpa			310 MIN	276 MIN	276 MIN	379 MIN	370 MIN	483 MIN
Elongation %			12%	18%	18%	7%	3%	2%
Impact Joules			-	14 J AVERAGE	12 J AVERAGE	-	-	-
Hardness range BHN			156-217	149-187	149-187	187-255	192-269	241-302
Heat Treatment Requirement			N/A	ANNEALING	ANNEALING	N/A	N/A	N/A
Structure-Matrix			80% FERRITE	95% FERRITE	95% FERRITE	50% FERRITE	60% FERRITE	80% PEARLITE
Total carbon %			3.30-3.80	3.30-3.80	3.30-3.80	3.30-3.80	3.30-3.80	3.20-3.80
Silicon %			1.80-2.80	1.80-2.80	1.80-2.80	1.80-2.80	1.80-2.80	1.80-2.80
Manganese %			0-0.40	0-0.40	0-0.40	0-0.60	0-0.80	0-0.80
Phosphorous %			0-0.06	0-0.06	0-0.06	0-0.06	0-0.06	0-0.06
Sulphur %			0-0.03	0-0.03	0-0.03	0-0.03	0-0.03	0-0.03
Magnesium%			0.025-0.060	0.025-0.060	0.025-0.060	0.025-0.060	0.025-0.060	0.025-0.060
Copper%			-	-	-	0.50-1.00	0.50-1.00	0.50-1.00
Nickel%			-	-	-	-	0.04-0.1	0.04-0.1

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Our casting facility incorporates two primary core making processes: The **Shell Core process** and the **Cold Box process**.

SHELL CORE

Shell cores in casting offer advantages such as high dimensional accuracy, superior surface finish, adaptability to complex geometries, reduced gas formation, faster production rates, and environmental sustainability. The thin, uniform shell promotes uniform heat transfer, minimizing defects and contributing to improved casting quality, making shell cores a valuable choice for efficient and high-quality manufacturing processes.



COLD BOX

Cold box cores in casting offer expedited curing, ensuring rapid production cycles and contributing to manufacturing efficiency. Known for high dimensional accuracy, these cores enable the creation of intricate and complex components with superior surface finishes, reducing the need for extensive post-casting finishing. Their adaptability to various core sizes and production volumes enhances flexibility, making them suitable for both low and high-volume casting requirements.



At **Shilin Cast**, our commitment stands strong — we promise to deliver products and services that adhere to mutually agreed-upon requirements, ensuring punctual delivery to our esteemed customers. Our dedication goes beyond mere compliance; we foster a culture of Quality, continuously refining our processes and enhancing the effectiveness of the Quality Management System. As a testament to our unwavering commitment, Shilin Cast proudly maintains a registered **ISO 9001:2015 Quality Management System**, showcasing our relentless pursuit of excellence. We conduct thorough inspection checks at various stages of the production process.

1. INCOMING INSPECTION



Incoming inspection is a vital quality control step in manufacturing, involving the examination of raw materials or components to ensure they meet specifications. Any identified issues are documented and addressed before integration into the manufacturing process, preventing defects and ensuring the final products meet quality standards, reducing the risk of rework or warranty claims.

2. IN-PROCESS INSPECTION

In-process inspection in casting involves ongoing assessments and examinations conducted at various stages of the casting manufacturing process to ensure the quality, integrity, and adherence to specifications of the casted components, helping to identify and address any issues promptly.



3. FINAL INSPECTION

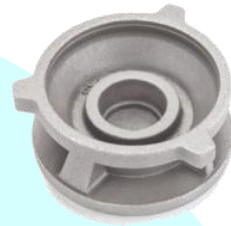
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PRODUCT PORTFOLIO

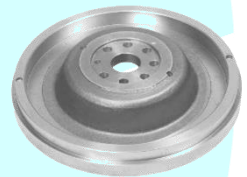


We specialize in the production of Cast Iron and Ductile Iron Castings, as well as Machined Components, Assemblies, and Sub-assemblies tailored for various industries, including:

1. **Pump Components:** Our expertise encompasses the manufacturing of volute casings, split casings, bearing housings, motor brackets, support heads, and more.



2. **Engine Components:** Our capabilities extend to producing engine components such as cylinder heads, engine blocks, flywheel housings, timing gear covers, and oil sumps. These parts are produced using both green sand and hand molding techniques, ensuring precision, strength, and reliability under demanding engine conditions.



3. **Motor Components:** Our offerings include end-shields, motor housing & frames, terminal box castings, fan covers and mounting bases.



Our commitment lies in delivering high-quality, precision-engineered products to meet the unique requirements of each industry we serve.

OUR CLIENTELE



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AN ISO 9001:2015 Certified Company



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