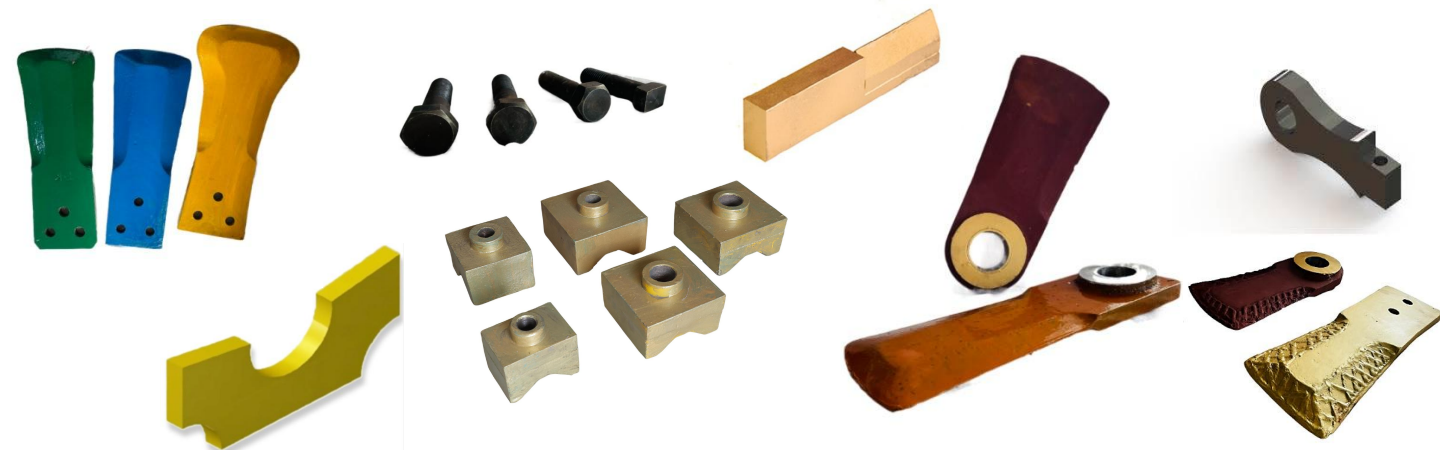




 A Unique Solution To Sugar
Industries 



- CANE CUTTING KNIVES
- FIBERIZER HAMMER
- STATIC COLLAR/STATIONARY FLANGES

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ZHIP Technologies, mainline business is the manufacture of alloy, carbon, and stainless steel castings. Our Modern production facilities include a foundry, a heat treatment facility, a laboratory for physical and chemical testing, a machine shop, and assembly. We produce, a variety of high-quality castings, such as duplex, high-nickel alloys, manganese steel, and high-carbide alloys, among others.

The company has a 35,000 square foot footprint .

LEVELLER/CHOPPPER KNIVES

SELF-SHARPENING AUSTENITIC STEEL KNIVES



- The austenitic matrix along with carbides over the grain boundaries, emphasizes the self-sharpening property of the knives.
- Due to its austenite structure (BCC structure) there is uniform microstructure all over the job.
- As steel is an Mn-based alloy, it is ductile, malleable, and non- magnetic in nature. Due to this, the knives do not crack or piece into two. Rather the knives bend in extreme conditions, with a sharp cutting edge.

Bolt Type



Tensile Strength Kgf/mm ²	60
Yield Strength Kgfa/mm ²	50
% elongation	28
% R.A	60
Hardness HRC	35
Impact Joules	170

Austenitic steel knives can me manufactured in swing type as well as bolt type, according to given drawing.

Swing Type

REPLACABLE TIPS TYPE KNIVES

A. Self Sharpening TIPS Type

The replaceable tips made of Manganese/Molybdenum are nonmagnetic, ductile, and have an improved chemical composition. The alloy has an austenitic matrix and, as a result, a BBC structure, which endows it with the ability to self-sharpen. It is up to 35 hrc in hardness.

B. Carbide TIPS Type

These very strong, high tensile, hardened, tempered, and properly case-carburized steel with hardness ratings of 55 to 60Hrc are made of high chromium, high carbon alloy. They are utilised for heavy cutting edges.



Replacable Tips

KNIVES WITH HARDFACING

- Hardfacing is deposition of thick coating of hard, wear resistant material over base metal.
- High-quality, welding rods are used for this operation, enabling hardness between 50 and 60 hRc, a coefficient of friction between 0.12 and 0.13, an ASTM G-65 wear rating between 20 and 26.
- We use an automatic welding equipment allows for a uniform covering on the body's surface. After hardfacing, stress reliving lowers the likelihood of erosion, fracture, etc.



Hardfacing Type

HAMMER

FIBERIZER HAMMER TIPS

1. DOMITE TIPS

ZHIP Hammer tips are bimetallic composites containing, high chromium and high carbon, with optimum percentage of molybdenum which is vacuum brazed with mild steel blocks.

2. CERAMIC TIPS

These are extremely strong abrasion-resistant composite consisting of complex ceramic composites in a metallic matrix that is duly sintered cast.

3. Cryo-Treated Tips

Domite Tips are cryogenically heated after hardening and before tempering to allow retained Austenite to undergo complete martensite crystallization. Martensite crystallization is one of the hardest metastable metastable crystals with a body centred tetragonal crystal (BCT).



Hammer Tips



Hammer Body

HAMMER BODY

- The hammer body is manufactured from a cast steel grade that contains more carbon and chromium.
- As hammers are created from casting, the machining step is eliminated, making them more affordable.



Hammer

STATIONARY FLANGES/STATIC COLLAR

- Stationary flanges are manufactured in a single piece casting
- Flanges are made, in special alloy steel which contains high chromium, Molybdenum and nickel alloy.
- Due to presence of high chromium and nickel & Moly, flanges are better resistance to wear and tear.
- Flanges are having good weldability & possible to weld with any type of SS welding rods.
- Bilateral use of both the sides, makes our static-collar/stationary flanges blue-chip in sugar industries.

Tensile Strength Kgf/mm ²	84
Yield Strength Kgfa/mm ²	70
% elongation	24
% R.A	60
Hardness HRC	30
Impact Joules	100



Stationary Flang



FOUNDRY

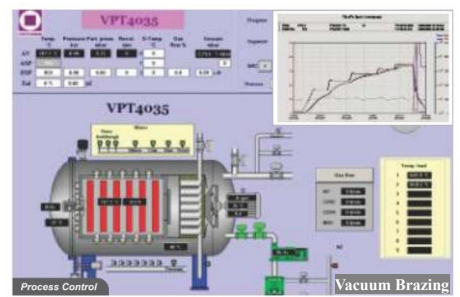
Foundry	SPECIFICATION	FACILITY
Casting process	C02 Sand cating	Inhouse
Melting Furnace	250Kw Frequency Crucible: 300kg-1No 500kg-1No	Inhouse
Fettling	SWING FRAME GRINDER & hand grinders, flexible shaft grinder, pneumatic chipper,	Inhouse
Blasting+Pickling and passivation	Hanger type shot blasting machine	Inhouse + Outsourcing
Pattern and die	Outsourcing	Inhouse storage
Heattreatment	Gas fired furnace, with recorder. Quenching tank	Inhouse
Physical testing Laboratory	UTM, Impact test machine, Metullurgical microscope, Sand test equipment	Inhouse
Chemical Testing laboratory	GNR make spectrometer Weight analysis	Inhouse
Softwares	Softcast simulation Auto-Cad Catia	inhouse
Range of alloy	We can supply castings under various international standards like ASTM. DIN, IS, BS, etc. Alloys such as – CF8, CF8M, CF3, CF3M, CF8C, CN7M (ALLOY-20) CA15, CA6NM, CD4MCU, DIN4136, CF12, MONEL, ect. In stainless steel series, where as in alloy steel series WCB, WCI, WC6, WC9, C5, C12. Also high Chrome , High manganese etc.	
Machine shop	HMC-2Nos, Vmc-Inos, Horizontal boring machine-1Nos, Drlling machine-2Nos.	



Spectrometer



UTM



Process Control

Vacuum Brazing



Hardness Test Machine



Impact Test MACHINE



Moulding



Heat Treatment