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Mini Special High Grade (SHG) Jumbo

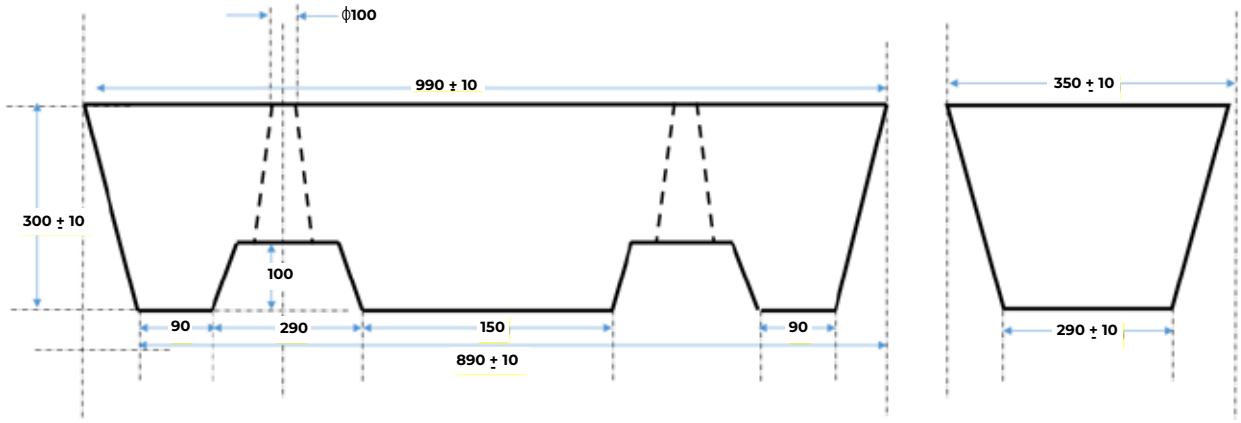
Chemical Specifications (For 0.5 MT)

Component	Guaranteed	HZL Typical
Zinc (Zn)	99.9950% Min	99.9960% Min
Lead (Pb)	0.0030% Max	0.0020% Max
Copper (Cu)	0.0010% Max	0.0003% Max
Cadmium (Cd)	0.0030% Max	0.0002% Max
Iron (Fe)	0.0020% Max	0.0010% Max
Aluminium (Al)	0.0010% Max	0.0001% Max
Tin (Sn)	0.0010% Max	0.0001% Max

Bundle Specifications

Component	Guaranteed (0.5 MT)
Weight	450 to 550 Kg
Length	990 (+/- 10) mm
Width	350 (+/- 10) mm
Height	300 (+/- 10) mm

Slab Dimensions and View



Physical Specifications: All Dimensions in mm

Cost Advantage of using 1 MT or 0.5 MT Jumbos over ingots:

~20$ Cost Saving using jumbo

Operational cost savings due to lower melting losses
"Tests show the loss to be 10-15 kg per tonne lower for jumbos" (cost savings of around $ 20 per tonne zinc consumed)

Rationale for lower melting loss:

1. Since jumbos have a lesser surface area/weight ratio, the melting loss is lower
2. With any form of zinc there will be some melting losses. Mostly this is due to the naturally oxidized surfaces
3. The loss is proportional to surface area

Handling SHG Jumbos:

1. Mini jumbo is available in the size of 0.5 tonnes, Shape & Size as ASTM standard
2. Lifting holes are provided for the use with chain slings
3. Usually jumbos are lowered vertically or at a steep angle into the bath due to restricted access and to limit the melting rate

Melting SHG Jumbo:

1. Lowering the jumbo into the bath can be done manually (e.g. in 1/3rd increments) but automated feed entry is preferred
2. Preferable to lower the jumbo into the bath slowly using an automated entry arrangement (motorized chain hoist)
3. This is a safer practice and avoids sudden changes in bath temperature
4. Normally introduced behind the snout or at the side of the snout depending on available space. Monorail or conveyor loading mechanism normally used. Often automated entry is used

Advantages of SHG-Jumbo over ingots:

The use of zinc jumbo instead of conventional 25 Kg slab provides galvanizers with a number of benefits.

Convenience

Use of zinc jumbos simplifies storage, handling and loading of the zinc into the galvanizing bath. Jumbos are lowered easily and conventionally into the zinc bath using a chain sling attached to the crane hoist

Security

Ensuring secure storage at the galvanizing plant is therefore very important. Due to large scale, they are much less vulnerable to theft

Safety

There is much less risk of operator injury using zinc jumbos. They require crane for loading into the bath primarily and operators can therefore remain at safe distance. Melting of jumbos involves less turbulence results in less molten zinc splashing

Better Bath Management

Till the time jumbo is submerged into the bath, it has full support of the crane. When we add bundles of ingots, they get separated and few fall to the bottom of the bath results in some disturbance in dross layer, causing dross to mix into the zinc bath and subsequently contaminate the galvanizing coating

Cost Saving

Zinc melting loss is lower in case of jumbos as compared to ingots. This is due to less ash being generated on the galvanizing bath surface during melting as a result of less turbulence by splashing. Turbulence created in the galvanizing bath when adding zinc is caused by its surface condition (such as presence of minor oxidation, white rust, moisture condensation). This turbulence causes in ash formation on the bath surface. Tests have shown that the use of zinc jumbos results in 15 Kg less ash per tonne of zinc added to bath. Even after allowing for the subsequent sale of zinc ash, the cost savings are estimated to be approx. $20/tonne of zinc added

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