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| <p>Department Cast Products</p> <p>Approver's Title Cast Products Manager</p> <p>Author's Title Process Superintendent Casting</p> |  <p>TOMAGO ALUMINIUM Company Pty. Limited</p> <p>STANDARD OPERATING PROCEDURE MANUAL LOAD DESCRIPTION AND WEBBING RESTRAINT REQUIRED FOR TYPICAL PACKS & PACK GROUPS LASHING TABLES</p> <p><i>Controlled copy on day of printing 5/08/2020 only</i></p> | <p>Document No: SOP40a DMS: 120000004778 Version 04</p> <p>Original date: Aug 2008 Previous date: 01/07/19 Issue date: 31/07/20</p> <p>Page 1 of 2</p> |
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Minimum 4000kg LC strap & geared winch assemblies required for max row weights:

Ingot Packs:-

Most critical pack with a narrow base of 430mm x 1150 mm H. (small footprint)

Loaded as a row of 3 stacks across the trailer floor
 Typical pack weight = 985 kg to 1060 kg
 Typical average row weight = 2955 kg to 3180 kg
 In front of all rows place a floor timber
 70mm X 70mm and no less than 65mm X 65mm Floor timber need to be tied back.
 1 Strap per row, using the geared webbing winch fitted to the under floor track. Tension wrench to a minimum of 200ft lb or 298Nm.



Short Billets: - base <1M 2 pack row


Loaded as a group of 2 across the trailer floor
 Typical pack weight = 1020 kg to 1150 kg
 Typical average row weight = 3060 kg to 3450 kg
 1 Strap per row, 1 x 75mm or 100mm 4t webbing strap tensioned as firmly as possible. When using the geared webbing winch fitted to the under floor track. Tension wrench to a minimum of 200ft lb or 298Nm.





T Bar: Chains- base of 460mm x 883 H, 2 H & 1 per row

Loaded as 1 across and 2 high the trailer floor
 Typical item weight = 1020 kg to 1400 kg
 Typical average row weight = 2040 - 2800kg
 Large piece of rubber matting to be placed under each foot layer to prevent T-bar from sliding on the truck bed during transport.
 Rubber to be larger than the T-bar foot print.
 Position the Tees to ensure axle weights are not exceeded.
 Position the tees evenly across the deck.
 Do not stack tees more than 2 high.
 Use at least 1 x 8mm transport chain for every row of tees.
 Tension the chain to 750kg min using suitable tensioner
 Use extreme care if using a "dog"
 Transport chain should comply with AS/NZS 4344
 Do not use webbing straps to restrain this product



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| <p>Slabs: - 2840mm L x base of 1300mm W x 900 H, 3 H per row (Slab height is determined by total weight for the trailer combination)</p> <p>Small: - 1800mm L x base of 1300mm W x 900 H, 3 H per row Loaded as a group of 1W x 3H across the trailer floor</p> <p>Long slabs = 2800 kg to 3000 kg Short slabs = 1800 -1900kg Long row = 8400 kg to 9000 kg Short row = 5400 – 5700kg 4 Straps per LONG group 3 straps per SHORT group</p> | <p>Always place timbers on the FLAT</p>  <p>Long slabs = 4 straps Short slabs = 3 straps</p> |
| <p>Long Billets: - 5800mm L x base 460mm x 883 H, 4 H (max) Loaded as a group of 2 across the trailer floor Typical pack weight = 1500 kg to 2500 kg Typical average row weight = 3000 kg to 5000 kg Maximum group weight up to 16000 kg 5 Straps per group.</p> |  |
| <p>Webbing strap, geared ratio winch, lashing angle, hook and keeper (<i>minimum component LC fitted is 4000kg</i>) assembly LC rating determines the maximum load one strap can be expected to hold – 80% of the forward direction load weights on this page. The value of friction has been omitted from calculations as it is not always reliable, however there will always be some additional restraint value gained from friction present, supplying an additional margin of restraint. Higher LC and higher clamping force is applied using an additional strap on the slabs and long billets as well as using high pre-tension levels of 1000kg (min) per geared ratio under floor winches on relatively low load heights.</p> | |