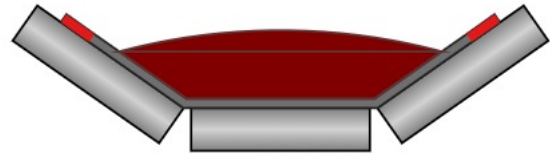


Helix Technologies Pty Ltd

Project	Demo 02 Conveyor High Lift	Client	ABC Iron
Project No.	P9823	Prepared By	Peter Burrow
Conveyor No.	C223	Design Date	01 Oct 2019



Low Bulk Density: 1860 kg/m3



High Bulk Density: 2400 kg/m3

Conveyed Material		Belt Speed & Capacity	
Material Description	Iron ore, Lump & Fines Product	Belt Speed	4.3 m/s
Low Bulk Density	1860 kg/m3	Belt Design Capacity Input	9400 tonnes/hr
High Bulk Density	2400 kg/m3	Section Loading Max Capacity	9400 tonnes/hr
Surcharge Angle	15 °	Carry Idler Trough Angle	35 °
Angle of Repose	34 °	Belt Dimensions	
Material Lump Size	31.5 mm	Top Cover Thickness	22 mm
Belt Make & Class		Bottom Cover Thickness	7 mm
Belt Category	Bando Steel	Belt Carcass Thickness	4.4 mm
Belt Description	BANDO STEEL CORD	Belt Total Thickness	33.4 mm
Belt Class / Plies	ST-1800	Total Belt (Tape) Length	628.8 m
Belt Reinforcement Fibre	Steel	Time for 1 Revolution	146.2 sec
Belt Width	1800 mm	Belt Load Area & Capacity at 1860kg/m3	
Belt Modulus	129600 kN/m	Minimum Rec. Edge Distance	122 mm
Cord Diameter	4.4 mm	Actual Edge Distance	149 mm
Cord Pitch	10 mm	Load Burden Depth	338 mm
Number of Cords	0	Load Burden Width	1345 mm
Belt Tensions		Belt Load Area at Minimum Recommended Edge Distance	0.3479 m2
Belt Rated Tension / m width	253 kN/m	Belt Load Area utilised at Low Bulk Density	0.3265 m2
Calculated Tension / m width	237.3 kN/m	Belt Actual % Full at Low BD	93.8 %
Belt Rated Tension for width	455.4 kN	Belt Load Area & Capacity at 2400 kg/m3	
Calculated Max Run Tension	427.1 kN	Minimum Recommended Edge Distance	122 mm
Minimum Tension Tmin	119.3 kN	Actual Edge Distance High BD	229 mm
Allowable Tension Rise, Starting	150 %	Belt Load Area Utilised at High Bulk Density	0.2530 m2
Allowable Belt Tension, Starting	683.1 kN	Belt Actual % Full at High BD	72.7 %
Actual Belt Tension, Starting	457.1 kN	Flooded Belt Capacity at 2400 kg/m3	
Belt and Material Mass		Flooded Belt Load Area at Zero Edge Distance	0.4830 m2
Belt Top Cover Mass	44.7 kg/m	Flooded Belt Capacity	17944 tonnes/hr
Belt Bottom Cover Mass	14.2 kg/m	Flooded Belt Material Mass	1159.2 kg/m
Belt Carcass Mass	21.1 kg/m		
Belt Mass Wb (per linear m)	81.7 kg/m		
Material Mass Wm (per linear m)	607.2 kg/m		
Total Mass (Wb + Wm)	688.9 kg/m		
Total Belt Mass (Wb x L)	51,373 kg		