

	1	2	3	4	5	6	7	8								
A	TOLERANCES			WELDING		OTHERS										
	All dimensions shown in drawings are nominal ones. Working allowances needed due to shrinkage at welding must be specially considered by the work planning.			All groove welds are to be full penetration welds if not otherwise shown.		LAMELLAR INSPECTION: - Symbol in drawing - Inspection of plate for lamellar defects before and after welding - Accepted criteria: EN10160 class S2,E3										
	AIR GAPS for welds are not considered in drawing dimensions. Gaps shall be taken into account at plate work before welding. For full penetrating groove welds air gap size depends on used welding method and position, being typically 2...3 mm.			Butt welds for extension joints, if not shown in drawing: - plates - stiffeners - backing strips (All backing strips to be continuous in the full length of girder)		GRINDING: Details to be ground are marked in drawings.										
	For special tolerances of box girder fabrication see: - KONECRANES instruction FA 144en - KONECRANES drawings D5117-1 and D5117-2			Welding of stiffener ends, L is given in drawings:		Grinding of weld toe										
B	For trolley girder (box girder types) tolerances see: - KONECRANES drawing D3756			Welding of diaphragm corners of box beams:		Grinding of corner plate tip must reach 20mm around the tip										
	For flange joint fabrication see: - KONECRANES drawing D5275en			Working temperatures for welding: - See KONECRANES instruction FA 119		BOLTINGS: All bolts must be secured either with tab washers or nyloc nuts or double nuts or torque tightening, if specially requested in drawings. Note: Hardened washers must be used under both a bolt head and a nut, when applying torque tightening.										
C	WELDING					Tightening torque on screws										
	Welding symbols on drawings are according to standard EN 22553 (ISO 2553).					Table values are used, if not other instructions are given in the drawing. Torque values are applicable to screws of strength class 8.8.										
D	Weld classes and quality requirements are specified in standard EN ISO 5817.					MATERIAL REQUIREMENTS:										
	INSPECTION OF WELDS General requirements: - Groove and fillet welds 100%VT (visual) - Groove welds 10%UT (ultrasonic) Extended requirements are marked in the drawings: - Groove welds.....up to 100% UT, MT or RT (X-ray) - Fillet welds.....up to 100% MT (magn. part.)					Steel grades and special requirements are given in drawings. Standard for plate and profile material is EN10025-2. Quality class of material from the table below, unless otherwise specified in a workshop drawing:										
E	GENERAL TOLERANCES according to ISO 2768-1, ISO 13920, ISO 9013													Minimum of steel qualities to be used		
	Table with 14 columns: Dimension range, >0.5, 3, 6, 30, 120, 315, 1000, 2000, 4000, 8000, 12000, 16000, 20000. Rows: LENGTH DIMENSIONS, Machining, Chamfers and radii, Cutting, bending, Thermal cutting, Angular dimensions, Machining, Bending s<4, Bending s ≥ 4, welding.													Table with 2 columns: Thickness [mm], Quality class EN10025-2. Rows: t ≤ 16, 17 ≤ t ≤ 80.		
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	Revision table with 6 columns: Rev, Date, Description, Dwn, Appd, M-film. Rows: N 01.09.06, M 03.12.03, L 02.12.03, K 14.10.03, J 14.02.02, H 14.12.01, G 18.12.00, F 12.08.00, E 11.04.00, D 06.07.99, C 14.03.99, B 24.03.98, A 97/46.													Drawing no. RTG1-OP20		