

DIN EN 15689:2010-04 (E)

Railway applications - Track - Switches and crossings - Crossing components made of cast austenitic manganese steel

Contents		Page
Foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	5
4	Quality systems	5
5	Sample approval	5
6	General requirements	6
6.1	Materials (liquid chemistry)	6
6.2	Microstructure	6
6.3	Surface conditions	6
6.3.1	Un-machined and heat treated surfaces	6
6.3.2	Definition of surface zones	7
6.3.3	Machined surfaces	7
6.3.4	Tolerances	7
6.4	Internal soundness	8
6.4.1	General	8
6.4.2	Definition of zones and acceptance levels	8
6.4.3	Frequency for radiographic examination	12
6.5	Foundry practice	12
7	Acceptance tests	13
7.1	Chemical analysis	13
7.2	Impact bend	13
7.3	Metallographic examination	13
7.4	Visual inspection	13
7.5	Dye penetrant testing	13
7.6	Radiography	14
7.6.1	General	14
7.6.2	Method of radiography	14
8	Additional requirements for pre-hardened crossings	14
8.1	Qualification	14
8.1.1	Generally	14
8.1.2	Dye penetration test	14
8.1.3	Hardness requirements	14
8.2	Production tests	16
8.3	Monitoring of pre-hardening process	16
9	Weld rectification of surface discontinuities	16
9.1	Qualification of the weld procedure and the welder	16
9.2	Definition of rectification zones, max. dimensions of excavations	16
9.3	Testing of weld rectification	17
9.4	Welding records	17
10	Identification and marking	17

11	Documentation	18
12	Non-common cast manganese crossings	18
	Bibliography	19