

ISO 683-11:2012-09 (E)

Heat-treatable steels, alloy steels and free-cutting steels - Part 11: Case-hardening steels

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Classification and designation	3
4.1	Classification	3
4.2	Designation	3
5	Information to be supplied by the purchaser	3
5.1	Mandatory Information	3
5.2	Options and/or supplementary or special requirements	3
6	Manufacturing process	4
6.1	General	4
6.2	Deoxidation	4
6.3	Heat-treatment condition and surface condition at delivery	4
6.4	Traceability of the cast	4
7	Requirements	4
7.1	Chemical composition, hardness and hardenability	4
7.2	Machinability	5
7.3	Cold shearability	5
7.4	Grain size	5
7.5	Non-metallic inclusions	5
7.6	Internal soundness	5
7.7	Surface condition	6
7.8	Shape, dimensions and tolerances	6
8	Inspection	6
8.1	Testing procedures and types of documents	6
8.2	Frequency of testing	7
8.3	Test to be carried out for specific inspection	7
9	Test methods	7
9.1	Chemical analysis	7
9.2	Hardness and hardenability tests	7
9.3	Retests	7
10	Marking	8
Annex A (normative) Supplementary or special requirements		21
Annex B (informative) Designation of steels given in this part of ISO 683 and of comparable grades covered in various designation systems		22

Annex C (informative) Dimensional standards applicable to products complying with this part of ISO 683	23
Annex D (informative) Classification of steel grades according to minimum tensile strength as a function of diameter after hardening and tempering at 200 °C.....	24
Bibliography	25