

DIN EN ISO 20312:2012-01 (E)

Petroleum and natural gas industries - Design and operating limits of drill strings with aluminium alloy components (ISO 20312:2011); English version EN ISO 20312:2011

Inhalt	Seite
Foreword	3
Introduction.....	4
1 Scope	5
2 Normative references	5
3 Terms, definitions, symbols and abbreviated terms	5
3.1 Terms and definitions	5
3.2 Symbols.....	7
3.3 Abbreviated terms	11
4 Properties of ADP and tool joints	12
4.1 General	12
4.2 New pipes and tool joints data.....	12
4.3 Buoyant weight.....	12
4.4 Mechanical properties.....	12
4.5 ADP with integral tool joint and heavy wall ADP	15
5 Considerations and limitations of drill string design using ADP.....	19
5.1 Application aspects of aluminium alloy drill pipe.....	19
5.2 General principles of aluminium drill string assembly design.....	20
5.3 Influence of temperature on choice of material for drill pipe	21
5.4 Resistance to hydroabrasive and corrosive damage	27
5.5 Buckling	28
6 Basic requirements for calculation of drill strings containing ADP	30
7 Drill pipe operation.....	31
7.1 Operations management	31
7.2 General drill pipe operating recommendations	31
7.3 Fatigue strength limitations	35
7.4 Combined load capacity limitation	36
8 Wear-based inspection, identification and classification of aluminium drill pipe	40
8.1 Inspection.....	40
8.2 Wear-based marking and identification of pipe and tool joints.....	42
8.3 Wear-based pipe classification.....	43
8.4 Wear-based tool joints classification	44
8.5 Pipe repairing and discarding.....	44
9 Transportation and storage of pipe	45
9.1 Transportation of pipe	45
9.2 Storage of pipe	45
Annex A (informative) Drill pipe design, range and technical properties of integral tool joint ADP and heavy wall ADP.....	46
Annex B (normative) Calculations	51
Annex C (informative) Conversion of SI units to USC units.....	62
Bibliography.....	63