DIN EN 12716:2019-03 (E)

Execution of special geotechnical work - Jet grouting

Contents

Page

European foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 5

4 Information needed for the execution of the work 8
4.1 General 8
4.2 Specific requirements 8

5 Geotechnical investigation 10
5.1 General 10
5.2 Specific Requirements 10

6 Materials and products 11
6.1 General 11
6.2 Cement 11
6.3 Water 11
6.4 Bentonite 12
6.5 Additions 12
6.6 Admixtures 12
6.7 Reinforcement 12

7 Considerations related to design 12
7.1 General 12
7.2 Geometry 14
7.3 Strength and Deformation Characteristics 14
7.4 Permeability 15

8 Execution 15
8.1 General 15
8.2 Equipment 16
8.3 Preparation of the site 17
8.4 Drilling and Tolerances 17
8.5 Jet grouting 18
8.6 Spoil Return 18
8.7 Placing the reinforcement 18

9 Supervision, testing and monitoring 18
9.1 General 18
9.2 Preliminary tests 19
9.3 Supervision and process testing 19
9.4 Testing of the jet grouted elements 20
9.4.1 Testing to assess geometry 20
9.4.2 Mechanical tests 20
9.4.3 Permeability tests 21
9.5 Monitoring 21

10 Records 21
10.1 Documents available on site 21

10.2 Documents to be produced on site 22

11 Special requirements 22
11.1 Compliance with national and European Standards 22
11.2 Site safety 23
11.3 Protection of the environment 23

Annex A (informative) Determination of the material strength 24

Annex B (informative) Sample Quality 26

Annex C (normative) Direct and indirect tests and quality controls 29

Annex D (informative) Examples of site records of jet grouting works 31

Annex E (informative) Degree of obligation of the provisions 34

Bibliography 37