DIN EN 12845-3:2024-10 (E)

Fixed firefighting systems - Automatic sprinkler systems - Part 3: Guidance for earthquake bracing

Contents

Page

European foreword 3

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 Design principles 7

5 Sway bracing and sprinkler pipe support 7
5.1 General 7
5.2 Sway brace design 8
5.2.1 Steps in designing sway brace 8
5.2.2 Step 1, define sway bracing locations 9
5.2.3 Step 2, calculate seismic design load for each sway bracing location 13
5.2.4 Step 3, select the proper sway bracing shape, size and maximum length 22
5.2.5 Step 4, select the proper method to attach the sway bracing to the structure and to the piping 25

6 Flexibility 32
6.1 General 32
6.2 Flexible couplings 32
6.2.1 General 32
6.2.2 Risers and standpipes 32
6.2.3 Horizontal main distribution pipes and distribution pipes 33
6.2.4 Drops 33
6.3 Seismic separation assemblies 34

7 Clearance 37
7.1 Clearance around piping through walls or floors 37
7.2 Clearance at sprinklers 37

8 Other provisions 37
8.1 Bracing of suspended ceilings 37
8.2 Water supply 37
8.3 Storage racks with in-rack sprinklers 37

Bibliography 38