

ISO/TS 17870-3:2023-01 (E)

Ceramic tiles - Installation - Part 3: Installation of large format porcelain tiles and panels by mechanical means onto a supporting structure

Contents		Page
Foreword		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Exchange of information	3
5	Workmanship	4
6	Ventilated façades	4
6.1	General	4
7	Methods of mechanical fixing for porcelain	5
7.1	General	5
7.2	Anchored systems	5
7.2.1	General	5
7.2.2	Bracket and strap attachment	6
7.2.3	Undercut drilling	7
7.2.4	Anchorage - pull-out testing of undercut anchors and edge fracture testing of slotted edge systems	7
7.3	Apertured tile systems	8
7.4	Edge slotted systems	9
7.4.1	General	9
7.4.2	Horizontal drift	10
7.4.3	Effect of frost	10
7.5	Visible overlapping clip systems	10
7.6	Off-site prefabrication	11
7.7	Cutting large format porcelain tiles or panels	11
7.7.1	Wet cutting	11
7.7.2	Scribe and break	11
8	Erection sequence	11
9	Setting out	12
9.1	General	12
9.2	Plumb and planarity	12
10	Fixings	12
11	Wind loads	12
11.1	Wind-load calculations	12
11.2	Wind-load testing	13
11.3	Components - wind-load resistance	13
11.4	Operational forces	13
12	Impact criteria and performance testing	13
12.1	General	13
12.2	Performance category	13

12.3	Impact resistance	14
12.4	Hard body impact testing	15
12.4.1	General	15
12.4.2	Equipment	16
12.4.3	Procedure	16
12.5	Soft body impact testing	16
12.5.1	General	16
12.5.2	Equipment	17
12.5.3	Procedure	18
12.6	Mesh backing	19
13	External corners and edge treatment	19
14	Thermal moisture and structural movement	20
14.1	General	20
14.2	Movement	20
14.2.1	General	20
14.2.2	Thermal movement	20
14.2.3	Moisture movement of a masonry structure to which a façade supporting metal framework is to be attached	21
14.2.4	Permeability to water	21
15	Durability and design life	21
15.1	General	21
15.2	Durability	21
15.3	Simplicity	22
16	Fixing large format porcelain tiles or panels façade systems support rails to a metallic subframe or directly to the building structure	22
16.1	Strength	22
16.2	Adjustment	22
17	Reaction to fire	23
18	Handling of materials	23
18.1	Size and weight	23
18.2	System training of installers	23
19	Storage and control of materials	23
19.1	Marking and packing	23
19.1.1	General	23
19.1.2	Protective packing	23
19.2	Delivery and handling	24
19.3	Storage of prefabricated components	24
19.3.1	General	24
19.3.2	Protection of work	24
20	Cleaning	24
21	Access for maintenance	24
21.1	General	24
21.2	Designing for access	25
22	Environmental Effects	25
22.1	Effect of weathering, atmospheric pollution and chemical attack	25
22.2	Effect of changes in temperature	25
22.3	Effect of sunlight	25
	Bibliography	26