Translation of the supplement of the test report

Number of document:	(3738/395/11) – CM of 2012-03-14
Customer:	MKT Metall und Kunststoff-Technik GmbH & Co. KG Auf dem Immel 2 67685 Weilerbach
Order of:	2011-03-25
Order signs:	410/11
Order received:	2011-03-29
Content of the contract:	Testing and assessment of the fire resistance of MKT Wedge Anchors B installed in non-cracked concrete structures (strength class ≥ C20/25) and loaded by tension and under one-sided fire exposure
Test basis:	DIN EN 1363-1: 1999-10, DIN 4102-2: 1977-09
Sample receipt:	1995, 1997, 2005, Calendar week 12-2011
Sampling:	Information about a sampling is not available to the testing laboratory.
Sample identification:	none
Date of testing:	1995-09-21, 1995-11-14, 1995-01-15, 1997-01-14, 2005-10-31, 2005-11-03, 2011-03-31, 2011-04-05, 2011-04-12
Validity:	2017-03-14

This supplement of test report contains 3 pages including the cover sheet.

1 General

As ordered a test report on the fire behavior of tension loaded MKT Wedge Anchors B, consisting of a threaded stud, a washer and a nut, under a one-sided fire exposure according to DIN EN 1363-1: 1999-10 shall be issued.

2 Evaluation of the test results

Based on the available test results on the MKT Wedge Anchor B made of electroplated or hot dipped galvanized steel respectively MKT Wedge Anchor B A4 made of stainless steel (material No. 1.4401 or 1.4404 or 1.4571 or 1.4578) under a one-sided fire exposure to the standard temperature time curve (according to DIN EN 1363-1: 1999-10) the following fire resistances regarding steel failure, depending on the axial tensile load, can be provided. The spacing and edge distances must be selected such that steel failure is decisive.

Table 2-1: Design proposal on the MKT Wedge Anchor B regarding the fire resistance depending on the maximum axial tension loads

MKT Wedge Anchor B			**M6**	**M8**	**M10**	**M12**	**M16**	**M20**
Fire resistance [min]	Cross section (A_s)	[mm^2]	20,10	36,60	58,00	84,30	157	245
	Embedment depth[1] $h_{nom,red}$ ≥	[mm]	39	47	56	67	84	99
30	Tension load N ≤	[kN]	0,59	0,88	1,40	2,04	3,79	5,97
60	Tension load N ≤	[kN]	0,46	0,72	1,14	1,66	3,09	4,87
90	Tension load N ≤	[kN]	0,34	0,56	0,88	1,29	2,40	3,77
120	Tension load N ≤	[kN]	0,27	0,48	0,76	1,10	2,05	3,22

[1] The embedment depth of MKT Wedge Anchor B A4 made of stainless steel (material No. 1.4401 or 1.4404 or 1.4571 or 1.4578) can be taken from ETA-05/0018.

Design proposal for the MKT Wedge Anchor B regarding shear load

If the edge distance c is chosen such that steel failure occurs, the load values form Table 2-1 can be transferred to shear stressed anchors as well.

3 Specific indications

3.1 The test report no. (3738/395/11) – CM of 2012-03-14 does not replace verification according to the procedures of German building authorities (abP, abZ, ETA). It must also be considered, that fire resistances of anchors may be regulated by European Technical Approvals in the future.

3.2 The given design proposal applies only to the tested MKT Wedge Anchor B taking into account the constraints of the technical data sheets of MKT Metall und Kunststoff-Technik GmbH & Co. KG. The installation must comply with the European Technical Approval No. ETA-01/0013 respective Approval No. ETA-05/0018.

3.3 The design proposal on the MKT Wedge Anchor B is valid only in conjunction with one-sided fire-stressed concrete structures (strength class ≥ C20/25), which can be classified at least into the fire resistance class equivalent to the fire resistance class of the anchor.

3.4 The validity of the supplement of the test report ends with the validity of the above mentioned test report No. (3738/395/11) – CM from 2012-03-14 on 2017-03-14.