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Autorizován a notifikován podle článku 10 Směrnice Rady 89/106/EC z 21. prosince 1988 o sbližování zákonů, předpisů a správních postupů členských zemí týkajících se stavebních výrobků.

MEMBER OF EOTA

European Technical Approval ETA-09/0379

Obchodní název: *Trade name:*	**FAST SM**
Držitel schválení: *Holder of approval:*	FAST Sp. z o.o. St. Foluszova 112 65-751 Zielona Gora Poland
Druh a použití výrobku: *Generic type and use of construction product:*	Vnější tepelně izolační kompozitní systém (ETICS) z pěnového polystyrenu s omítkou pro použití jako vnější izolace stěn budov. *External Thermal Insulation Composite Systems with rendering on polystyrene for the use as external insulation to the walls of buildings.*
Platnost od: do: *Validity from:* *to:*	31.12.2009 30.12.2014
Výrobce: *Manufacturer:*	FAST Sp. z o.o. St. Foluszova 112 65-751 Zielona Gora Poland
Toto Evropské technické schválení obsahuje: *This European Technical Approval contains:*	16 stran *16 pages*

I LEGAL BASES AND GENERAL CONDITIONS

1 - This European Technical Approval is issued by the Technical and Test Institute for Construction Prague (Technický a zkušební ústav stavební Praha, s.p.) in accordance with:

- Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products[1], as amended by the Council Directive 93/68/EEC[2] and Regulation (EC) No. 1882/2003[3]
- Government Decree No. 190/2002 Coll.[4] , as amended
- Common Procedural Rules for Requesting, Preparing and Granting European Technical Approvals set out in the Annex to Commission Decision 94/23/EC[5]
- Guideline for European Technical Approval of “External Thermal Insulation Composite Systems with rendering” ETAG No. 004, edition March 2000

2 - The Technical and Test Institute for Construction Prague is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for the intended use remains with the holder of the European Technical Approval.

3 - This European Technical Approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those laid down in the context of this European Technical Approval.

4 - This European Technical Approval may be withdrawn by the Technical and Test Institute for Construction Prague pursuant to information of the Commission according to Article 5.1 of Council Directive 89/106/EEC in particular.

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6 - The European Technical Approval is issued by the approval body in its official language. This version fully corresponds to the version circulated within EOTA. Translations into other languages have to be designated as such.

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1 Official Journal of the European Communities N° L 40, 11.02.1989, p. 12

2 Official Journal of the European Communities N° L 220, 30.08.1993, p. 1

3 Official Journal of the European Communities N° L 284, 31.10.2003, p. 1

4 Collection of Laws of the Czech Republic Vol. 79 No. 190, 21/5/2002

5 Official Journal of the European Communities N° L 17, 20.01.1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of products and intended use

The External Thermal Insulation Composite System (ETICS) **FAST SM**, hereinafter referred to as the ETICS, is designed and installed in accordance with the ETA-Holder's design and installation instructions, deposited at the Technical and Test Institute for Construction Prague (TZÚS). The ETICS consists of the following components which are produced by the ETA-Holder or their suppliers.

This system can be sold under one trade name in compositions arising from clause 1.1.

1.1 Definition of product

Table No. 1

Components (see 2.3 for further description and characteristics of the components)		**Coverage** (kg/m², l/m²)	**Thickness** (mm)
Partially bonded ETICS with supplementary mechanical fixing (pursuant to the ETA-Holder's instructions, the minimal bonded surface shall be 40 %). National application documents shall be taken into account.			
Insulation material with associated methods of fixing	**Insulation product**		
	Foam polystyrene slabs (EPS with reaction to fire E, tensile strength perpendicular to the faces TR 100) and other observed properties given in table No. 10 of this ETA	-	50 – 250
	Adhesive		
	FAST Normal S *Product as delivered:* powder *Preparation:* powder requiring addition of 0.22 l/kg of water *Composition:* dry mineral-based cement mixture modified with synthetic polymers	3.0 – 5.0 (kg/m^2) of dry mixture	-
	FAST Specjal / FAST Specjal M *Product as delivered:* powder *Preparation:* powder requiring addition of 0.20 l/kg of water *Composition:* dry mineral-based cement mixture modified with synthetic polymers	3.0 – 5.0 (kg/m^2) of dry mixture	-
Mechanically fixed ETICS with supplementary bonding (pursuant to the ETA-Holder's instructions, the minimal bonded surface shall be 40 %). National application documents shall be taken into account.			
Insulation material with associated methods of fixing	**Insulation product**		
	Foam polystyrene slabs (EPS with reaction to fire E, tensile strength perpendicular to the faces TR 100) and other observed properties given in table No. 10 of this ETA	-	50 – 250
	Adhesive		
	FAST Normal S *Product as delivered:* powder *Preparation:* powder requiring addition of 0.22 l/kg of water *Composition:* dry mineral-based cement mixture modified with synthetic polymers	3.0 – 5.0 (kg/m^2) of dry mixture	-
	FAST Specjal / FAST Specjal M *Product as delivered:* powder *Preparation:* powder requiring addition of 0.20 l/kg of water *Composition:* dry mineral-based cement mixture modified with synthetic polymers	3.0 – 5.0 (kg/m^2) of dry mixture	-

	Mechanically fixing devices		
	WKRET-MET LFN ø 8, LFM ø 8 plastic nailed-in anchors **Ejotherm NT U** plastic nailed-in anchors **Ejotherm NTK U** plastic nailed-in anchors **Ejotherm STR U** plastic screwed-in anchors **KOELNER KI8M** plastic nailed-in anchors **Bravoll PTH-KZ 60/8-L_a, Bravoll PTH-KZL 60/8-L_a, Bravoll PTH 60/8-L_a, Brav$_a$ll PTH-L 60/8-L_a** plastic nailed-in anchors	-	-
Base coat	**FAST Specjal** / **FAST Specjal M** *Product as delivered:* powder *Preparation:* powder requiring addition of 0.20 l/kg of water *Composition:* dry mineral-based cement mixture modified with synthetic polymers	3.0 – 5.0 (kg/m^2) of dry mixture	-
	Glass fibre mesh for ETICS **AKE 145 A** / **VERTEX R 117 A101** (mesh size 3.5 x 4.5 mm)	1.1 – 1.2 m^2/m^2	-
Key coat	**FAST Grunt M** *Product as delivered:* ready-to-use liquid *Preparation:* do not dilute *Composition:* dispersion of acrylic resin with mineral additives	0,35 (kg/m^2)	-
Finishing coat	**Mineral renderings** always provided with one of the protective coatings including the relevant key coat		
	FAST Baranek mineral rendering circulated, max. particle size 2.0 mm	2.25 (kg/m^2)	according to max. particle size
	FAST Baranek mineral rendering circulated, max. particle size 2.5 mm	3.00 (kg/m^2)	
	FAST Baranek mineral rendering circulated, max. particle size 3.0 mm	3.85 (kg/m^2)	
	FAST Kornik mineral rendering scratch, max. particle size 2.0 mm	2.80 (kg/m^2)	
	FAST Kornik mineral rendering scratch, max. particle size 3.0 mm	3.50 (kg/m^2)	
	Product as delivered: powder *Preparation:* powder requiring addition of 0.20 - 22 l/kg of water *Composition:* dry mineral-based mixture with sorted silica aggregate and plasticizers		
Key coat under protective coating	**FAST Grunt S** Key coat under silicate protective coat *Product as delivered:* ready-to-use liquid *Preparation:* do not dilute *Composition:* dispersion of potassium water glass	0.08 – 0.10 (kg/m^2)	-
	FAST Grunt SIL key coat under silicone protective coat *Product as delivered:* ready-to-use liquid *Preparation:* do not dilute *Composition:* siloxane water emulsion	0.05 – 0.17 (l/m²)	-
	FAST Grunt G key coat under acrylic and siloxane protective coating *Product as delivered:* ready-to-use liquid *Preparation:* 1-2 paints, to dilute 1:1 for the second paint *Composition:* dispersion of micro-molecular acrylic resins	0.05 – 0.25 (kg/m^2)	-

Protective coating	**FAST F-S** silicate protective coating *Product as delivered:* ready-to-use liquid *Preparation:* 2 paints, to dilute max. 5 volume % of FAST Grunt S *Composition:* dispersion of potassium water glasses and styrene-acrylic resin with mineral additives and pigments	0.10 – 0.20 (l/m²) for a paint	-
	FAST Silikon silicone protective coating *Product as delivered:* ready-to-use liquid *Preparation:* 1-2 paints, for the first paint to dilute max. with 10% of water *Composition:* dispersion of silicone and styrene-acrylic resin with mineral additives and pigments	0.12 (l/m²) for a paint	-
	FAST SI-SI siloxane protective coating *Product as delivered:* ready-to-use liquid *Preparation:* 1-2 paints, for the first paint to dilute max. with 10% of water *Composition:* water styrene-acrylic dispersion, siloxane emulsion, additives and pigments	0.10 – 0.20 (l/m²) for a paint	-
	FAST F-AZ acrylic protective coating *Product as delivered:* ready-to-use liquid *Preparation:* 1-2 paints, for the first paint to dilute max. with 10% of water *Composition:* dispersion of acrylic resin with mineral additives and pigments	0.10 – 0.20 (l/m²) for a paint	-
Ancillary materials	Descriptions in accordance with Section 3.2.2.5 of the ETAG, remain under the ETA-Holder responsibilities.		

1.2 Intended use

This ETCIS is applied onto external walls of buildings. The walls are made of masonry (bricks, blocks, stones …) or concrete (cast on site or as prefabricated panels) with reaction to fire classification A1 or A2-s2, d0 pursuant to EN 13501-1 or A1 according to EC decision 96/603/EC as amended. The ETICS is designed to provide the wall onto which it is applied with satisfactory thermal insulation.

The ETICS is made of non load-bearing construction elements. It does not directly contribute to the stability of the wall on which it is installed; however, it can contribute to protection from the effect of weathering.

The ETICS can be used on new or existing (retrofit) vertical walls. It can also be used on horizontal or inclined surfaces which are not exposed to precipitation.

It is not intended to ensure air-tightness of the building structure.

The choice of the method of fixing and design of the concrete composition depends on the properties of the substrate which can require correction (see 7.2.1 of ETAG 004) and shall be in accordance with the national regulations.

The provisions of this European Technical Approval (ETA) are based on an assumed intended working life of at least 25 years of the ETICS, provided its properly used and maintained. The indications given as to the working life cannot be interpreted as a guarantee given by the manufacturer or the Approval Body but should only be regarded as a means for choosing appropriate products in relation to the expected economically reasonable working life of the works.

2 Characteristics of the products and methods of verification

2.1 General

The identification tests and the assessment of the fitness for use of this ETICS pursuant to the Essential Requirements were carried out in compliance with "ETAG 004, Guideline for European Technical Approval of External Thermal Insulation Composite Systems" concerning External Thermal Insulation Composite Systems with rendering (hereinafter referred to as "ETAG 004").

The ETA is issued for the ETICS based on the agreed data deposited at the Technical and Test Institute for Construction (TZÚS) Prague, s.p. which identifies the ETICS that has been assessed and judged. Any changes to the production process of the ETICS or to the ETICS itself which could make the deposited data incorrect should be notified to the TZÚS Prague, s.p. before the changes are introduced. TZÚS Prague, s.p. shall decide whether or not such changes can affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment and /or alteration to the ETA is needed.

2.2 ETICS properties

2.2.1 Reaction to fire

Table No. 2

Composition of the system	Heat combustion (MJ/kg)	Thickness	Flame retardant content	Euroclass pursuant to EN 13501-1: 2003
adhesive	max. 0.14	max. 15 mm	no flame retardant	B – s1, d0
EPS slabs of density ≤ 20 kg/m^3	-	no limits	in the amount ensuring the Euroclass E in accordance with EN 13501-1:2003	
mortar of base coat	max. 0.13	max. 3 mm	no flame retardant	
glass fibre mesh	max. 7.81	max. 0.5 mm	no flame retardant	
key coat for mineral finishing coats	max. 2.81	max. 0.1 mm	no flame retardant	
mineral finishing coat	max. -0.29	max. 3 mm	no flame retardant	
key coats for protective coatings	max. 32.77	max. 0.1 mm	no flame retardant	
protective coatings	max. 5.09	max. 0.1 mm	no flame retardant	

Note: A European reference fire scenario for facades has not been laid down so far. In some Member States, the classification pursuant to EN 13501-1:2003 might not be sufficient for the use in facades. An additional assessment of the ETICS pursuant to national regulations (e.g. based on a large scale test) might be necessary to comply with the Member State regulations until the existing European classification system has been completed.

2.2.2 Water absorption (test of capillarity)

Base coat FAST Specjal / FAST Specjal M:

- Water absorption after 1 hour < 1 kg/m²
- Water absorption after 24 hours < 0.5 kg/m²

Rendering systems

Table No. 3

Rendering systems	Finishing coat		Water absorption after 24 hours	
			< 0.5 kg/m²	≥ 0.5 kg/m²
base coat + finishing coats with the relevant key coat and protective coating	FAST Baranek – 2.0 mm mineral rendering	FAST Grunt S, key coat for silicate coatings FAST F-S, silicate protective coating	X	
		FAST Grunt SIL, key coat for silicone coatings FAST Silikon, silicone protective coating		X
		FAST Grunt G, key coat for siloxane coatings FAST SiSi, siloxane protective coating		X
		FAST Grunt G, key coat for acrylic coatings FAST F-AZ, acrylic protective coating	X	
	FAST Baranek – 3.0 mm mineral rendering	FAST Grunt S, key coat for silicate coatings FAST F-S, silicate protective coating	X	
		FAST Grunt SIL, key coat for silicone coatings FAST Silikon, silicone protective coating	X	
		FAST Grunt G, key coat for siloxane coatings FAST SiSi, siloxane protective coating		X
		FAST Grunt G, key coat for acrylic coatings FAST F-AZ, acrylic protective coating	X	
	FAST Kornik with all types of coatings		X	

2.2.3 Hygrothermal behaviour

The hygrothermal-cycling test was carried out on a wall.

None of the following defects occurred on the assessed renderings and base coat during and after the testing:

- blistering or peeling of any finishing coat
- failure or cracking associated with joints between insulation product boards or profiles used in system
- detachment of render
- cracking allowing water penetration into the insulation layer

Thus, the ETICS is assessed as resistant to hygrothermal cycles.

2.2.4 Freeze / thaw behaviour

Rendering system FAST Baranek – 2.0 mm with silicone protective coating FAST Silikon siloxane protective coating FAST SiSi and FAST Baranek – 3.0 mm with siloxane protective coating FAST SiSi Water absorption of the rendering systems was lower than 0.5 kg/m^2 after 24 hours and the ETICS with these finishing coats has been assessed with the simulated method of frost resistance as freeze/thaw resistant.

Rendering systems: Water absorption of the rendering systems was lower than 0.5 kg/m^2 after 24 hours and the ETICS with these finishing coats has been assessed as freeze/thaw resistant.

2.2.5 Impact resistance

The resistance to hard body impacts (3 J and 10 J) and to perforation suggests the following use categories:

Table No. 4

Rendering systems	Finishing coat	Standard glass fibre mesh
base coat + finishing coats with relevant key coat and protective coating	FAST Baranek FAST Kornik	Category III

2.2.6 Water vapour permeability

Table No. 5

Rendering systems	Finishing coat	Equivalent air thickness (m)
base coat + finishing coats with relevant key coat and protective coating	FAST Baranek FAST Kornik	≤ 2.0 (test result obtained with max. particle size 3 mm: 0.23)

2.2.7 Dangerous substances

The ETICS of the given composition is considered to meet the safety requirements regarding the occurrence of dangerous substances in accordance with H Instructions (Harmonized Approach to Dangerous Substances pursuant to Guidelines for Construction Products, issued in 2002, regarding dangerous substances).

In this respect, a written declaration of conformity was made by the manufacturer.

In addition to the specific clauses relating to dangerous substances contained in this ETA, there may be other requirements applicable to the ETICS falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Directive, these requirements need also to be complied with, when and where they apply.

2.2.8 Safety in use

2.2.8.1 Bond strength

Bond strength between the base coat and polystyrene

Table No. 6

Conditioning		
No complementary conditioning	**After the hygrothermal cycles (on the wall)**	**After the freeze/thaw cycles (on samples)**
≥ 0.08 MPa	≥ 0.08 MPa	≥ 0.08 MPa

The bond strength between the adhesives and the substrate and the EPS (safety in use for the bonded ETICS)

Table No. 7

Substrate	No complementary conditioning	48 h's immersion in water + 2 h 23°C/50 %RH	48 h's immersion in water + 7days 23°C/50 %RH
concrete	≥ 0.25 MPa	≥ 0.08 MPa	≥ 0.25 MPa
expanded polystyrene	≥ 0.08 MPa	≥ 0.03 MPa	≥ 0.08 MPa

The ETICS can be installed on the substrate with application of the adhesive on a minimal surface of 20%. The ETA-Holder requires 40 % for the bonded systems.

2.2.8.2 Fixing strength (displacement test)

The test is not required because the ETICS fulfils the following criteria:

- the bonding surface is larger than 20% for mechanically fixed ETICS with supplementary bonding
- after Render Strip Tensile Test at 2 % render strain value, only cracks with width of less or equal to 0.2 mm were observed.

2.2.8.3 Wind load resistance

Safety in use when fixing the ETICS with anchors.

The following values only apply to the combination (anchor's trade name) / (EPS properties) mentioned in the first line of the table.

Table No. 8

Kind of the anchor	Trade name		surface assembly **WKRET-MET LFN Ø 8, LFM Ø 8** (ETA – 06/0080) **EJOTHERM NT U** (ETA - 05/0009) **EJOTHERM NTK U** (ETA – 07/0026) **KOELNER KI 8M** (ETA – 06/0191) **BRAVOLL PTH-KZ60/8-L_a, PTH-KZL60/8-L_a, PTH-60/8-L_a, PTH-L 60/8-L_a** (ETA05/0055) surface and countersinked assembly **EJOTHERM STR U** (ETA - 04/0023)
	Plate diameter (mm)		60 and more
Properties of EPS	Thickness (mm)		≥ 50 ≥ 100 for countersinked assembly
	Tensile strength perpendicular to the faces (kPa)		≥ 100
Maximal load in pull through	Anchors not placed at the panel joints *(pull–through test of fixings – ETAG 004, Art. 5.1.4.3, scheme 1a)*	R_{panel}	Minimal value: **0.45 kN** Average value: **0.47 kN**
	Anchors placed at the panel joints *(pull–through test of fixings + foam block test – ETAG 004, Art. 5.1.4.3, scheme 2b)*	R_{joint}	Minimal value: **0.38 kN** Average value: **0.41 kN**

$$R_d = (R_{panel} \times n_{panel} + R_{joint} \times n_{joint}) / \gamma$$

n_{panel}: number (per m^2) of anchors not placed at the panel joints

n_{joint}: number (per m^2) of anchors placed at the panel joints

γ: national safety factor

2.2.9 Thermal resistance

The thermal transmittance of the wall covered by the ETICS is calculated in accordance with the standard EN ISO 6946:

$U = U_c + \chi_p \cdot n$

Where: $\chi_p \cdot n$ has only to be taken into account if it is greater than 0.04 W/(m^2.K)

U: global thermal transmittance W/ (m^2.K)

n: number of anchors per 1 m^2

χ_p: local influence of thermal bridge caused by an anchor. The values listed below can be taken into account if not specified in the anchor's ETA:

= 0.002 W/K for anchors with a stainless steel screw covered by plastic anchors and for anchors with an air gap at the head of the screw (the value of $\chi_p \cdot n$ is negligible for $n < 20$)

= 0.004 W/K for anchors with a galvanised steel screw with the head covered by plastic material (the value of $\chi_p \cdot n$ is negligible for $n < 10$)

= negligible for anchors with plastic nails

U_c: thermal transmittance of the current part of the covered wall (excluding thermal bridges) in W/ (m^2.K) determined as follows:

$$U_c = \frac{1}{R_i + R_{render} + R_{substrate} + R_{se} + R_{si}}$$

Where: R_i: thermal resistance of the insulation product (see the CE marking in reference to EPS EN 13163) in m^2.K/W

R_{render}: thermal resistance of the render (about 0.02 m^2.K/W)

$R_{substrate}$: thermal resistance of the substrate of the building (concrete, brick …) in m^2.K/W

R_{se}: external superficial thermal resistance in m^2.K/W

R_{si}: internal superficial thermal resistance in m^2.K/W

2.2.10 Aspects of durability and serviceability

2.2.10.1 Bond strength after artificial ageing

Table No. 9

Rendering systems	base coat + finishing coats with relevant key coat and protective coating:	FAST Baranek	≥ 0.08 MPa
		FAST Kornik	

2.3 Components' properties

2.3.1 Insulation product

2.3.1.1 Slabs made of expanded polystyrene (EPS) for bonded ETICS or for mechanically fixed ETICS

Factory-prefabricated, uncoated boards with right edges made of expanded polystyrene (EPS) pursuant to EN 13163 being described in the table below.

Table No. 10

Description of properties	**EPS slabs**
	For bonded and mechanically fixed ETICS
Reaction to fire / EN 13501-1:2003	Reaction–to-fire Euroclass – E, density ≤ 20 kg/m^3
Thermal resistance (m^2.K)/W	Defined in the CE marking according to the declaration in compliance with EN 13163
Thickness (mm) / EN 823	(50 - 250) ± 1 (EPS-EN 13163 - T2)
Length (mm) / EN 822	± 2 (EPS-EN 13163 - L2)
Width (mm) / EN 822	± 2 (EPS-EN 13163 - W2)
Squareness (mm/m) / EN 824	EPS-EN 13163 – S2
Flatness (mm) / EN 825	EPS-EN 13163 – P4
Surface condition	Cut surface (homogeneous, without "skin")

Dimensional stability under:	specified humidity and temperature / EN 1604	EPS-EN 13163-DS(70,-)1
	laboratory conditions / EN 1603	EPS-EN 13163-DS(N)2
Water absorption (partial immersion) / EN 1609		< 1 kg/m^2
Diffusion resistance factor (μ)/ EN 12086 – EN 13163		20 - 70
Tensile strength perpendicular to the faces in dry conditions (kPa)/ EN 1607		≥ 100 (EPS EN 13163-TR 100)
Shear strength (MPa) / EN 12090		≥ 0.02
Shear modulus of elasticity (MPa) / /EN 12090		≥ 1.0

2.3.2 Anchors

Anchors for EPS:

Plastic anchors with expansion pin, collar with diameter of 60 mm and screw or nail with a flat head.

Table No. 11

Trade name	**Plate diameter (mm)**	**Characteristic pull-out resistance**
WKRET-MET LFN ø 8, LFM ø 8	60	see ETA – 06/0080
Ejotherm NT U	60	see ETA - 05/0009
Ejotherm NTK U	60	see ETA - 07/0026
Ejotherm STR U	60	see ETA – 04/0023
KOELNER KI8M	60	see ETA – 06/0191
Bravoll PTH-KZ 60/8-L_a, PTH-KZL 60/8-L_a, PTH-60/8-L_a, PTH-L 60/8-L_a	60	see ETA – 05/0055

2.3.3 Base coat

The maximal crack width of the base coat with glass fibre mesh is less or equal to 0.10 mm at 2 % render strain value.

2.3.4 Glass fibre mesh

Table No. 12

Glass fibre mesh	**warp**	**weft**
	AKE 145 A / VERTEX R 117 A101	
Residual strength after ageing: (N/mm)	≥ 20	≥ 20
Relative residual resistance: (%) (after ageing) of the strength in the as-delivered state	≥ 50	≥ 50

3 Evaluation and Attestation of Conformity and CE marking

3.1 System of attestation of conformity

According to Decision 97/556/EC of the European Commission amended by 2001/596/EC, the system 2+ of attestation of conformity applies.

In addition, the system 1 and 2+ of attestation of conformity apply with regard to reaction to fire pursuant to Decision 2001/596/EC of the European Commission.

Considering the Euroclasses B and F for the reaction to fire, the system of attestation of conformity, regarding other characteristics than reaction to fire, is the system 2+. This system is described in Council Directive 89/106/EEC Annex III, 2 (ii), First possibility as follows:

Declaration of conformity of the ETICS by the manufacturer based on:

a) Tasks for the manufacturer:
   (1) initial-type testing of the ETICS and the components
   (2) factory production control
   (3) testing of samples taken at the factory in accordance with the prescribed Control Plan

b) Tasks for the Notified Body:
   (4) certification of factory production control based on:
      - initial inspection of the factory and factory production control
      - continuous surveillance, assessment and approval of the factory production control (FPC)

Considering the Euroclass B for reaction to fire, the system of attestation of conformity, regarding reaction-to-fire characteristic, is the system 1. The system 1 is described in Council Directive 89/106/EEC Annex lll, 2 (i), as follows:

Certification of conformity of the ETICS by a Notified certification Body based on:

a) Tasks for the manufacturer:
   (1) factory production control (FPC)
   (2) further testing of samples taken at the factory in accordance with the prescribed Control Plan

b) Tasks for the Notified Body
   (3) initial-type testing of the ETICS and the components
   (4) initial inspection of the factory and factory production control
   (5) continuous surveillance, assessment and approval of the factory production control (FPC)

3.2 Responsibilities

3.2.1 Tasks of the manufacturer

3.2.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. The production control system shall ensure that the product complies with this European Technical Approval.

The manufacturer may only use initial/raw/constituent materials (as relevant) stated in the technical documentation of this European Technical Approval.

The ETA-Holder makes sure that for the components of the ETICS which he does not manufacture by them, the factory production control (FPC) carried out by other manufacturers guarantees compliance of the components with the European Technical Approval.

The factory production control (FPC) and the provisions taken by the ETA-Holder for components not manufactured by them shall be in accordance with the Control Plan[6] relating to the European Technical Approval which is a part of the technical documentation of this European Technical Approval. The Control Plan[6] is laid down within the context of the factory production control system operated by the manufacturer and deposited at the Technical and Test Institute for Construction Prague.

The results of the factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan[6].

3.2.1.2 Other tasks of the manufacturer

The manufacturer shall contractually involve a body (bodies) which is (are) notified for the tasks referred to in section 3.1 in the field of the ETICS in order to undertake the actions laid down in section 3.3. For this purpose, the Control Plan referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the notified body or bodies involved.

For initial type testing (in case of the system 2+), the results of the tests carried out as a part of the assessment for the European Technical Approval can be used unless there are any changes to the production line or the plant. In such cases, the necessary initial type testing has to be agreed between the TZÚS Prague, s.p. and the Notified Bodies involved.

The manufacturer shall make a EC declaration of conformity stating that the construction product complies with the provisions of the European Technical Approval. The initial type-testing mentioned above could be taken over by the manufacturer for this declaration.

3.2.2 Tasks of the Notified Bodies

The notified body (bodies) shall carry out the:

- initial type-testing of the product (for system 1)

  The results of the tests carried out as a part of the assessment for the European Technical Approval can be used unless there are any changes to the production line or the plant. In such cases, the necessary initial type testing has to be agreed between the TZÚS Prague, s.p. and the Notified Bodies involved.

- initial inspection of factory and of factory production control (FPC)

  The Notified Body shall ascertain that, in accordance with the Control Plan[6], the factory (the employees and the equipment in particular) and the factory production control (FPC) are suitable to ensure continuous and proper manufacture of the components according to the specifications mentioned in clause 2 of this ETA.

- continuous surveillance, assessment and approval of the factory production control (FPC)

  The Notified Body shall conduct surveillance in the factory:

  – at least twice a year. If agreed between the Technical and Test Institute for Construction Prague and the Notified Body involved, this frequency can be reduced to once a year after a probative period

  or

  – at least once a year for surveillance of this manufacturer having a factory production control system (FPC) complying with EN ISO 9001 covering the manufacture of the ETICS components.

It has to be verified that the system of the factory production control and the specified automated manufacturing process are maintained taking the Control Plan[6] into account.

These tasks shall be performed in accordance with the provisions laid down in the Control Plan[6] relating to the European Technical Approval.

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6 The control plan is deposited at the Technical and Test Institute for Construction Prague and is handed over only to the notified bodies involved in the conformity attestation procedure

The Notified Body (Bodies) shall retain the essential points of its (their) actions mentioned above and present the results obtained and conclusions drawn in (a) written report (reports).

- In the case of the AoC system 1
  The notified body involved by the manufacturer shall issue an EC certificate of conformity of the product certifying conformity with the provisions of this European Technical Approval.
- In the case of the AoC system 2+
  The notified body involved by the manufacturer shall issue an EC certificate of conformity of the factory production control (FPC) certifying conformity with the provisions of this European Technical Approval.

When the provisions of the European Technical Approval and the Control Plan[6] are no longer fulfilled, the Notified Body shall withdraw the certificate of conformity and inform the Technical and Test Institute for Construction Prague without undue delay.

3.3 CE marking

The CE marking shall be affixed either on the product itself, on a label attached to it, on its packaging or on the commercial documents accompanying the components of the ETICS. The letters « CE » shall be followed by the identification number of the Notified Body involved and accompanied by the following additional information:

- name or identification mark and address of the ETA-Holder
- the last two digits of the year in which the CE marking was affixed
- number of the EC certificate of Factory Production Control (FPC) (system 2+)
- number of the EC certificate of conformity of the ETICS (system 1)
- number of the European Technical Approval
- the ETICS trade name
- number of the ETAG

4 Assumptions under which the fitness of the product for the intended use was favourably assessed

4.1 Manufacturing

The European Technical Approval is issued for the ETICS based on the agreed data/information deposited at the Technical and Test Institute for Construction Prague which identify/identifies the ETICS that has been assessed and judged. Any changes to the ETICS or production process which could result in this deposited data/information being incorrect should be notified to the Technical and Test Institute for Construction Prague before the changes are introduced. TZÚS Prague, s.p. shall decide whether or not such changes can affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA is necessary.

The components of the ETICS shall correspond to the products being subject to the approval tests as far as their composition and manufacturing process are concerned.

4.2 Installation

4.2.1 General

It is the ETA-Holder's responsibility to provide the interested persons with the information about the design and application of the ETICS. This information can be given in the form of technological procedures and copies of the relevant parties of the ETA. In addition, all the data concerning the execution of product shall be clearly indicated on the packaging and/or the enclosed instruction sheets using one or several illustrations.

In any case, the usage of the product shall comply with the national regulations and particularly those concerning fire resistance, structural analysis including wind load resistance and structural physics.

Only the components described in clause 1.1 of properties according to clause 2 of this ETA can be used for the ETICS.

The requirements given in ETAG 004, chapter 4 and chapter 7 have to be considered.

4.2.2 Design

For the bonded ETICS, the minimal bonded surface and method of bonding must comply with the ETICS properties (see Section 2.1.8.1 of this ETA) as well as the national regulations. The ETA-Holder specifies the minimal bonded surface of 40 % for the partially bonded ETICS with supplementary fixing.

For mechanically fixed ETICS with supplementary bonding, the choice and the number of anchors shall be determined considering:

- the design wind load suction and the national regulations (taking the national safety factors, the design rules, … into account)
- the characteristic pull–out resistance of the anchors off the considered substrate (see the installation parameters – effective anchorage, characteristic resistance ... – in the ETA of the anchors)
- safety in use of the ETICS (Art. 2.2.8) according to the method of fixing

4.2.3 Execution

It should be done by trained workers only.

The recognition and preparation of the substrate as well as the generalities about the execution of the ETICS shall be carried out in compliance with:

- Chapter 7 of ETAG No. 004, with compulsory removal of any existing paint finishes and any organic renders
- the national regulations in force

The particularities in execution linked to different methods of fixing and application of the rendering system shall be handled in accordance with the ETA-Holder prescriptions. In particular, it is necessary to comply with the quantities of the rendering applied, the thickness regularity and the drying periods between two layers.

5 Indication to the manufacturer

5.1 Packaging, transport and storage

Packaging of the components has to be such that the products are protected from moisture during transport and storage unless other measures are foreseen by the manufacturer for this purpose.

The components have to be protected against damage.

It is the responsibility of the manufacturer(s) to ensure that these provisions are easily accessible to the employees concerned.

5.2 Use, maintenance, repair

The finishing coat shall be normally maintained in order to fully preserve the ETICS's performances.

Maintenance includes at least:

- repairs of localised damaged areas due to accidents
- the aspect maintenance with products adapted and compatible with the ETICS (possibly after washing or ad hoc preparation).

Necessary repairs should be done as soon as possible.

It is important to carry out maintenance using readily available products and equipment, without causing any damage to the appearance.

It is the responsibility of the manufacturer(s) to ensure that these provisions are easily accessible to the employees concerned and that all necessary information on maintenance is handed over to the user.

The original Czech version is signed by

Ing. Jana Čurdová
Head of the Approving Body