



# HOBSON EHWMSZS37M SPLICE WEDGE ANCHOR

ETA 19/0351 (05/07/2019)

ETAG 001 Part 6<sup>†</sup>

Fire Resistant

DOC Link 10011

<sup>†</sup> Suitable for use in Cracked and Non-Cracked Concrete where multiple fixings are used in Non-Structural applications.



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## European Technical Assessment

**ETA 19/0351 of  
05/07/2019**

English translation prepared by IETcc. Original version in Spanish language

### General Part

**Technical Assessment Body issuing the ETA designated according to Art. 29 of Regulation (EU) 305/2011:**

Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc)

**Trade name of the construction product:**

**Hobson splice anchor EHWMSZS**

**Product family to which the construction product belongs:**

Anchor made of galvanized steel for multiple use for non-structural applications in concrete.

**Manufacturer:**

**Hobson Engineering Co. Py Ltd.**  
10 Clay Place.  
Eastern Creek.  
NSW 2766 Australia.  
website: [www.hobson.com.au](http://www.hobson.com.au)

**Manufacturing plant:**

Hobson Engineering plant 1

**This European Technical Assessment contains:**

8 pages including 3 annexes which form an integral part of this assessment.

**This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of:**

European Assessment Document EAD 330747-00-0601 "Fasteners for use in concrete for redundant non-structural systems", May 2018.

*English translation prepared by IETcc*

This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission according to article 25 (3) of Regulation (EU) No 305/2011.

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## SPECIFIC PART

### 1. Technical description of the product

The Hobson splice anchor EHWMSZS in diameter 6 is an anchor made of galvanized steel. The anchor is installed into a predrilled cylindrical hole and anchored by deformation-controlled expansion.

Product and product description is given in annex A.

### 2. Specification of the intended use in accordance with the applicable European Assessment Document.

The performances given in section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a mean to choosing the right products in relation to the expected economically reasonable working life of the works.

### 3. Performance of the product and references to the methods used for its assessment

#### 3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchorage satisfy requirements for class A1
Resistance to fire	See annex C2

#### 3.2 Safety in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for any load direction	See annex C2

### 4. Assessment and Verification of Constancy of Performances (hereinafter AVCP) system applied, with reference to its legal base

The applicable European legal act for the system of Assessment and Verification of Constancy of Performances (see annex V to Regulation (EU) No 305/2011) is 97/161/EC.

The system to be applied is 2+.

### 5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document.

The technical details necessary for the implementation of the AVCP system are laid down in the quality plan deposited at Instituto de Ciencias de la Construcción Eduardo Torroja.

English translation prepared by IETcc



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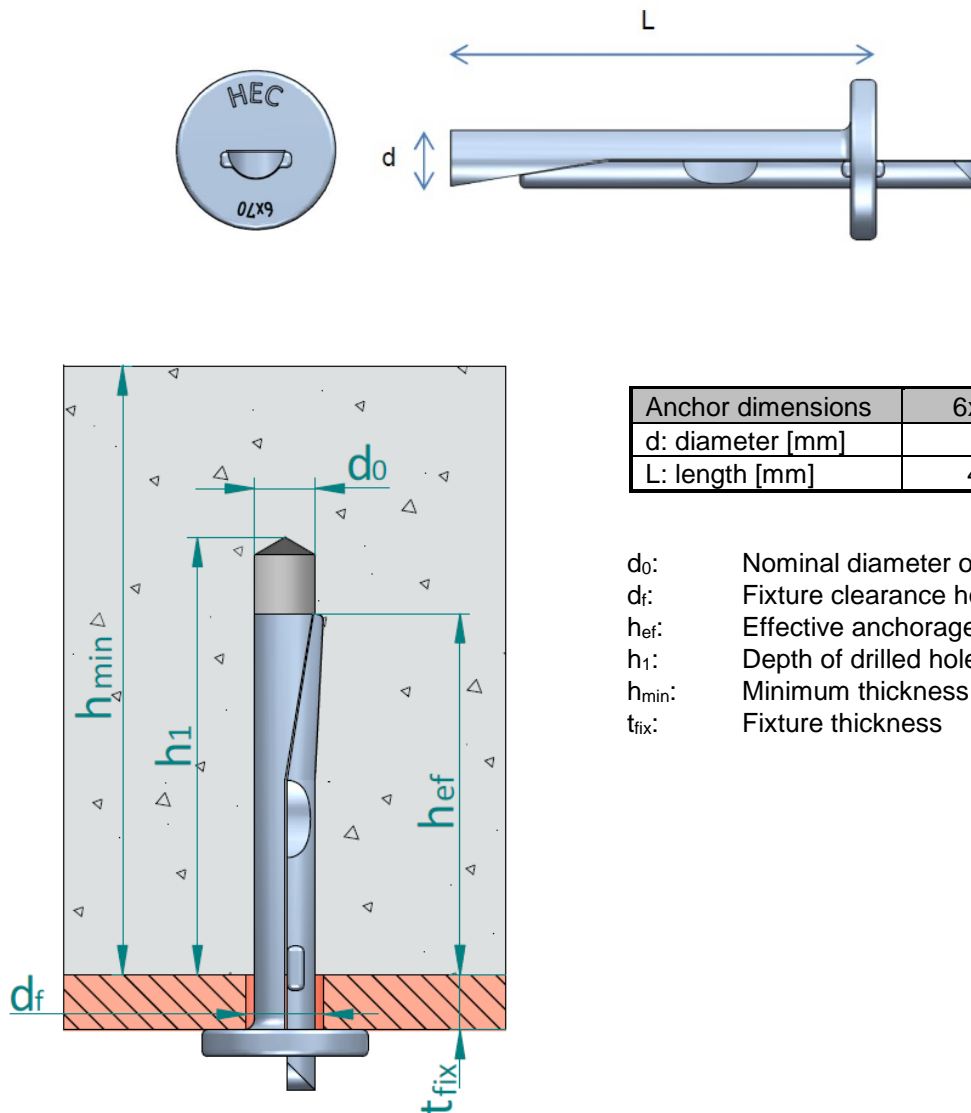


On behalf of the Instituto de Ciencias de la Construcción Eduardo Torroja  
Madrid, 05<sup>th</sup> of July 2019



Director IETcc-CSIC

**Product and installed condition**



Anchor dimensions	6x40	6x70
d: diameter [mm]	6	6
L: length [mm]	40	70

- $d_0$ : Nominal diameter of drill
- $d_f$ : Fixture clearance hole diameter
- $h_{ef}$ : Effective anchorage depth
- $h_1$ : Depth of drilled hole
- $h_{min}$ : Minimum thickness of concrete member
- $t_{fix}$ : Fixture thickness

**Table A1: Materials**

Item	Designation	Material for AN-CU
1	Anchor body	Carbon steel wire rod, galvanized $\geq 5 \mu\text{m}$ ISO 4042 A2
2	Shank	Carbon steel wire rod, galvanized $\geq 5 \mu\text{m}$ ISO 4042 A2

**Hobson splice anchor EWSMSZS**

**Product description**

Installed condition and materials

**Annex A1**

### **Specifications of intended use**

#### **Anchorage subjected to:**

- Static or quasi-static loads
- Redundant non-structural systems
- Fire exposure

#### **Base materials:**

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2008
- Strength classes C20/25 to C50/60 according to EN 206-1:2008
- Cracked or uncracked concrete

#### **Use conditions (environmental conditions):**

- Anchorages subjected to dry internal conditions.

#### **Design:**

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete.
- Verifiable calculation rules and drawings are prepared taking into account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static or quasi-static actions are designed for design method C in accordance with EN1992-4:2018
- Anchorages under fire exposure are designed in accordance with EN 1992-4:2018. It must be ensured that local spalling of the concrete cover does not occur.

#### **Installation:**

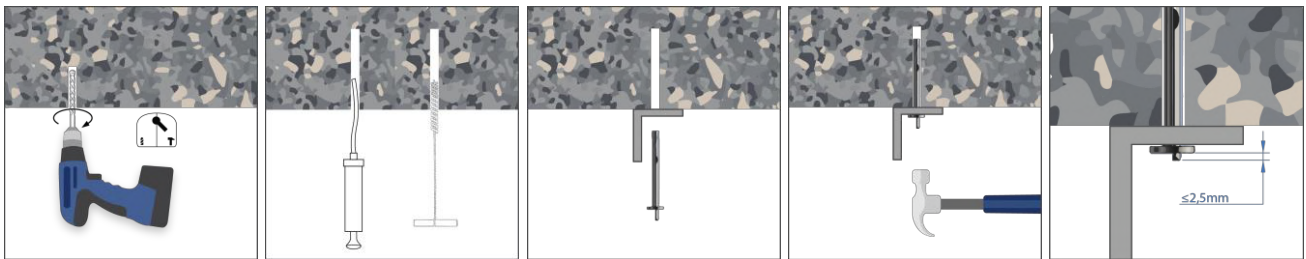
- Hole drilling by rotary plus hammer mode.
- Anchor installation carried out by appropriately qualified personal and under the supervision of the person responsible for technical matters of the site.
- Anchor expansion by impact on the shank. The anchor is properly set, if no further driving by impact is possible and the excess of the shank is at maximum 2,5 mm.
- The anchor may only be set once.

<b>Hobson splice anchor EWSMSZS</b>	<b>Annex B1</b>
<b>Intended use</b>	
Specifications	

**Table C1: Installation parameters for splice anchor EWSMSZS**

Installation parameters			Performances	
			6 x 40	6 x 70
$d_0$	Nominal diameter of drill bit:	[mm]	6	
$d_f$	Fixture clearance hole diameter:	[mm]	7	
$h_{min}$	Minimum thickness of concrete member:	[mm]	80	
$h_1$	Depth of drilled hole $\geq$	[mm]	40	
$h_{ef}$	Effective anchorage depth $\geq$	[mm]	32	
$t_{fix}$	Thickness of fixture:	[mm]	0 - 5	0 - 35
$s_{min}$	Minimum spacing:	[mm]	200	
$c_{min}$	Minimum edge distance:	[mm]	150	

**Installation process**



**Hobson splice anchor EWSMSZS**

**Performances**

Installation parameters and installation procedure

**Annex C1**



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**Table C2: Characteristic values of resistance loads in any direction of design method C according to EN1992-4 for splice anchor EWSMSZS**

Characteristic values of resistance to loads of design method C		Performances	
		ANCU 6 x 40	ANCU 6 x 70
<b>Any load direction</b>			
$F^{0}_{Rk}$	Characteristic resistance in C20/25 to C50/60 concrete:	[kN]	3,0
$\gamma_2 = \gamma_{inst}$	Installation safety factor: <sup>1)</sup>	[-]	1,2
<b>Shear loads: steel failure with lever arm</b>			
$M^{0}_{Rk,s}$	Characteristic bending moment	[Nm]	3,68
$\gamma_{Ms}$	Partial safety factor: <sup>1)</sup>	[-]	1,25

<sup>1)</sup> in absence of other national regulations

**Table C3: Characteristic values for resistance to fire for splice anchor EWSMSZS**

Characteristic resistance under fire exposure in concrete C20/25 to C50/60 in any load direction for use in concrete		Performances	
		ANCU 6 x 40	ANCU 6 x 70
R30	Characteristic resistance $F^{0}_{Rk,fi,30}$ <sup>1)</sup>	[kN]	0,41
R60	Characteristic resistance $F^{0}_{Rk,fi,60}$ <sup>1)</sup>	[kN]	0,30
R90	Characteristic resistance $F^{0}_{Rk,fi,90}$ <sup>1)</sup>	[kN]	0,19
R120	Characteristic resistance $F^{0}_{Rk,fi,120}$ <sup>1)</sup>	[kN]	0,14
R30 to R120	Minimum spacing $s_{min,fi}$	[mm]	200
R120	Minimum edge distance $c_{min,fi}$ <sup>2)</sup>	[mm]	150

<sup>1)</sup> in absence of other national regulations the partial safety factor for resistance under fire exposure  $\gamma_{M,fi}$  =1.0 is recommended.

<sup>2)</sup> If fire attack is from more than one side, the design method may be taken if edge distance of the anchor is  $c \geq 300$

**Hobson splice anchor EWSMSZS**

**Performances**

Characteristic resistances in concrete  
Characteristic values for resistance to fire

**Annex C2**