



The manufacturer **PFEIFER Seil- und Hebetchnik GmbH**  
**Dr.-Karl-Lenz-Strasse 66**  
**D-87700 Memmingen**

hereby declares that the following construction product with the

product designation **PFEIFER PWS wall shoe**  
in the sizes **PWS 120, PWS 200, PWS 330, PWS 400, PWS 650, PWS 900**

complies with the provisions of the following EC Directive(s), if installed in accordance with the installation instructions as set forth in the product documentation:

- *Decree (EU) No. 305/2011 of the European Parliament and Council dated 09 March 2011 regarding the determination of harmonised conditions for the marketing of construction products and the repeal of the Directive 89/106/EEC*  
**EC Construction Products Regulation**

and that the following standards were applied during dimensioning and construction:

<i>BS EN 1990:2010-12</i>	<i>Eurocode 0: Basis of structural design</i>
<i>BS EN 1990/NA:2010-12</i>	<i>Eurocode 0: Basis of structural design</i>
<i>BS EN 1990/NA/A1:2012-08</i>	<i>National annex - nationally determined parameters incl. Amendment A1</i>
<i>BS EN 1992-1:2011-01</i>	<i>Eurocode 2: Design of concrete structures</i> <i>Part 1-1: Common rules for building and civil engineering structures</i>
<i>BS EN 1992-1/NA:2011-01</i>	<i>Eurocode 2: Design of concrete structures</i> <i>Part 1-1: Common rules for building and civil engineering structures</i> <i>National annex – nationally determined parameters</i>
<i>BS EN 1993-1-1:2010-12</i>	<i>Eurocode 3: Design of steel structures</i> <i>Part 1-1: Common rules for building and civil engineering structures</i>
<i>BS EN 1993-1-1/NA:2010-12</i>	<i>Eurocode 3: Design of steel structures</i> <i>Part 1-1: Common rules for building and civil engineering structures</i> <i>National annex – nationally determined parameters</i>
<i>BS EN 1993-1-8:2010-12</i>	<i>Eurocode 3: Design of steel structures</i> <i>Part 1-8: Design of joints</i>
<i>BS EN 1993-1-8/NA:2010-12</i>	<i>Eurocode 3: Design of steel structures</i> <i>Part 1-8: Design of joints</i> <i>National annex – nationally determined parameters</i>
<i>BS EN 1090-1:2012-02</i>	<i>Execution of steel structures and aluminium structures</i> <i>Part 1: Requirements for conformity assessment of structural components</i>
<i>BS EN 1090-1:2011-10</i>	<i>Execution of steel structures and aluminium structures</i> <i>Part 2: Technical requirements for the execution of steel structures</i>
<i>DAfStb:1983</i>	<i>Issue 346: Investigations into shear pins set in concrete</i>

Performance feature	Service / categorisation / classification
Geometrical tolerances	EN 1090-2 (general) ISO 2768 (general)
Welding suitability	Steel S355J2+N acc. to EN 10025-2 Reinforcing steel bar B500B pursuant to DIN 488
Fracture toughness / resistance to brittle fracture	Steel S355J2+N: 27 joules at -20°C Reinforcing steel bar B500B pursuant to DIN 488
Carrying capacity	Design resistance to straight tensile force / shear force (C20/25):  PWS 120: $N_{Rd} = 120 \text{ kN} / V_{Rd} = 7.9 - 24 \text{ kN}$ PWS 200: $N_{Rd} = 200 \text{ kN} / V_{Rd} = 18.7 - 38.4 \text{ kN}$ PWS 330: $N_{Rd} = 330 \text{ kN} / V_{Rd} = 29.8 - 56.6 \text{ kN}$ PWS 400: $N_{Rd} = 400 \text{ kN} / V_{Rd} = 43.8 - 77.8 \text{ kN}$ PWS 650: $N_{Rd} = 650 \text{ kN} / V_{Rd} = 60.5 - 102.4 \text{ kN}$ PWS 900: $N_{Rd} = 900 \text{ kN} / V_{Rd} = 80.2 - 141.7 \text{ kN}$
Implementation class	EXC 2 pursuant to EN 1090-2
Fatigue strength	No performance specification (no performance determined)
Deformations in the serviceability limit state	No performance specification (no performance determined)
Fire resistance	No performance specification (no performance determined)
Fire resistance	Steel component, material categorised in class A1
Release of cadmium and its compounds	No performance specification (no performance determined)
Release of radioactive radiation	No performance specification (no performance determined)
Durability	No performance specification (no performance determined)
Manufacture	Acc. to drawing no.  PWS 120: 0045071 PWS 200: 0045072 PWS 330: 0045074 PWS 400: 0046076 PWS 650: 0045077 PWS 900: 0045078
System of conformity certification	2+

**Product description / intended use:**

*PFEIFER PWS wall shoes are special built-in elements made of rectangular tubes with welded-on reinforcing steel bars for the joining of steel reinforced concrete precast walls to one another or to the adjoining structural elements, e.g. foundations. Regular tensile and shear forces can be transmitted with these steelwork-type joints. For the transmission of force the hollow assembly space and the hollow space inside the square hollow profile must be completely filled with swelling mortar. The compressive forces are usually transmitted via the direct contact of the individual structural elements (if necessary with suitable timber packing or shim plates).*

*The maximum transmissible forces depend on the size of the PWS wall shoe employed as well as on the size of the PGS foundation anchor including PAP anchor bolts.*

*The use of the PFEIFER wall shoe is limited to stresses resulting from predominantly static loads.*

*PWS wall shoes are fixed and fastened in the formwork as built-in elements in the precast plant. For the absorption of the retention and tensile forces, the additional reinforcement must be determined for the respective installation situation by the responsible planner on the basis of common regulations and also installed in the precast element.*

**Certificate acc. to BS EN 1090 regarding the conformity of the factory production control:**

Name and address of the notified body: **GSI – Gesellschaft für Schweißtechnik International mbH  
Munich branch  
Schachenmeierstraße 37  
D-80636 München**

Code number of the notified body: 1182

Number of the certificate: 1182-CPD-1090-1.00108.GSIMü.2013.001

Period of validity of the certificate: 13.03.2014

**Authorised person responsible for the preparation and maintenance of the technical documentation:**

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*PFEIFER Seil- und Hebeteknik GmbH*

*Memmingen, 19/09/2013*

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