



factory production control (fpc) documentation of product development

client/customer Schroeder Ankers
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product coupler A4 M22

Friedrich Schroeder GmbH & Co. KG
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Neuenrade, den

07.12.2020

Seiten

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Anlagen:

4

A handwritten signature in blue ink, appearing to read 'B. Bültemeier', with a long horizontal stroke extending to the right.

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Dipl.- Ing. Bernd Bültemeier

Anlagenverzeichnis:

- Annex 1: Declaration of performance
coupler A4 M22
- Annex 2: Drawing coupler A4 M22
- Annex 3: internal tension test Schroeder coupler A4 M22
- Annex 4: Determination of axial load capacity
coupler A4 M22

Declaration of Performance/ EU Conformity for Factory Production Control (Construction Product)



The manufacturer

Friedrich Schroeder GmbH & Co KG
Hönnestraße 24 - 58809 Neuenrade
www.schroeder-neuenrade.de

declares that the following product of steel
construction

coupler A4 M22

is in conformity with the requirements of the Construction Products Regulation 305/2011/EC

Discription of the product and intended use

- The coupler is made up of a solid rod D=36 mm, stainless steel grade A4 (1.4401, 1.4404 or 1.4571), property class S275. On each end of the coupler with a internal thread M22.
- The coupler can be used to connect a) threaded rods M22 A4-70 in stainless steel or b) heavy duty anchor RS BA A4-70 M22/d=20 mm or c) a combination of both
- The coupler can take statical tensile loads. No Bending, no shear loads.

Standards used in the design and production

- | | |
|---------------------------------------|--|
| - DIN EN 1990 | EC 0: Basis |
| - DIN EN 1991 | EC 1: Actions |
| - DIN EN 1992-4 | EC 2: Design of fastenings for use in concrete |
| - DIN EN 1090-1:2012-02 + NA | Execution of steel structures and aluminium structures
Part 1: Conformity proof procedure for structural components |
| - DIN EN 1090-2:2018-09 + NA | Execution of steel structures and aluminium structures
Part 2: Technical requirements for the execution of steel structures |
| - DIN EN 10088-3:2014-12, -5: 2009-07 | Technical delivery - for bars, rods, wire and sections |

other relevant technical specifications and calculations

- 1.) workshop drawing coupler A4 M22 S9992VA 07.12.2020
- 2.) Determination of the axial load capacity Schroeder 26.11.2020

Declaration of Performance/ EU Conformity for Factory Production Control (Construction Product)



Certificate according to DIN/EN 1090 about conformity of the factory production control

Name, address and number of the notified body DVS Zert GmbH Halle Köthener Straße 33 a 06118 Halle (an der Saale) Code 2451	Certificate 2451-CPR-EN1090-2014.2181.004 Start of validity is 09.03.2012. The certificate is valid as long as the requirements of technical specification, the requirements of the production or the factory production control have not changed. System of assessment and verification of constancy of the performance : 2+
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Performance	Declared performance	Technical specification
Basic geometric tolerances	EN 1090-2, Anhang D.1	DIN EN 1090-1: 2012-02
Weldability	NPD	
Notched bar impact work	NPD	
Fire behaviour	NPD	
Release of cadmium	NPD	
Release of radioactive radiation	NPD	
Durability	Stainless steel CRC III acc. to EN 1993-1-4	
Fire resistance	NPD	DIN EN 1992-4
Load capacity	$N_{Rk,S} = 351 \text{ kN}$, $\gamma=2,4$, $N_{Rd,S} = 146,3 \text{ kN}$; min. torque moment = 100 Nm; max preload with 70% of tensile strength = 123 kN; consider load capacity of the screwed-in threaded rods.	
Deformations at the serviceability limit state	NPD	
Fatigue strength	NPD	
Production	in according to the workshop drawing	EN 1090-2:2018-09
Executionclass	EXC 3	

Other

Marking	Schroeder Logo, material code, dimension, code for production	
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Responsible and authorised person for maintaining and establishing the technical documentation

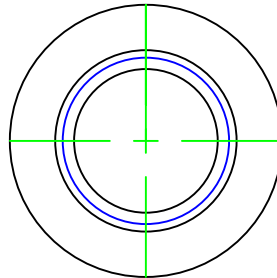
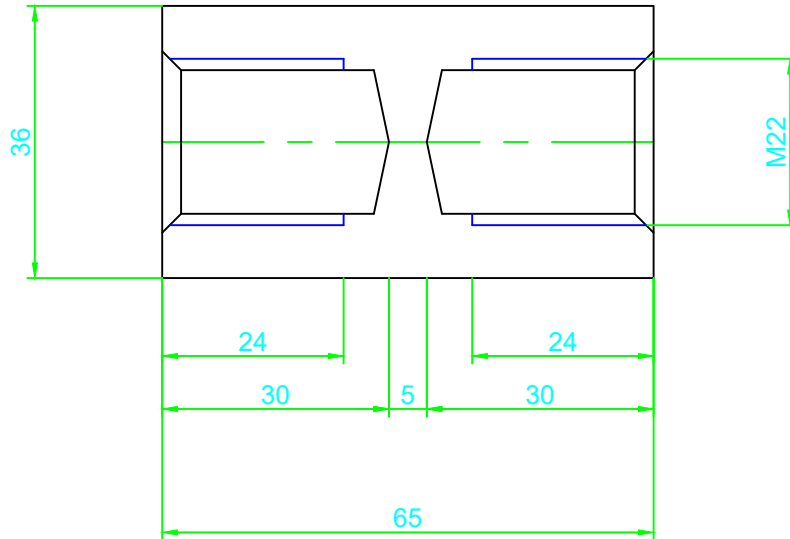
Bernd Bülte-meier

Neuenrade, 07.12.2020

Dipl. Betriebswirt MBA Sonja Rager

Dipl.- Ing. Bernd Bülte-meier

Coupler A4 M22

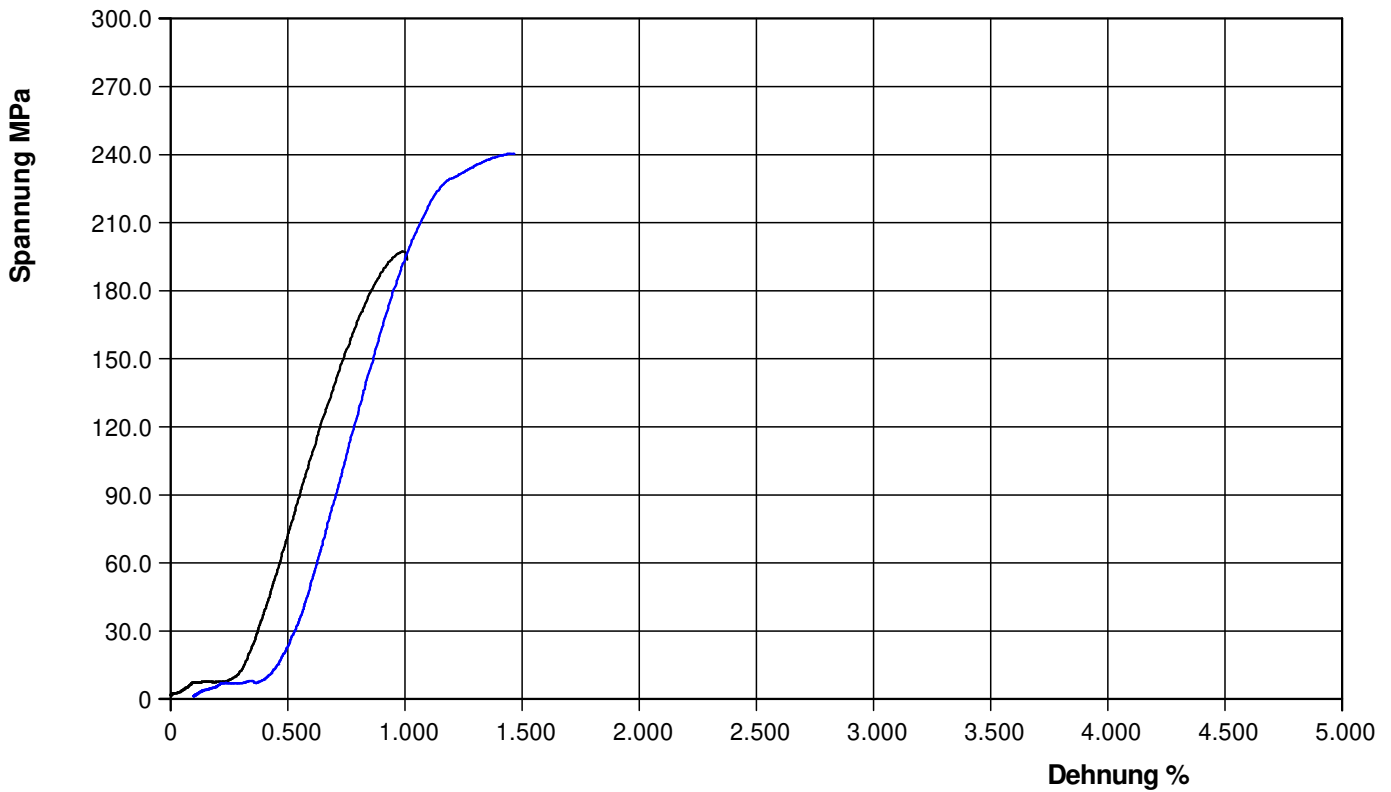


SCH	Verwendungszweck	Datum	Name	Werkstoff:	Oberfläche	
	Bau	Gez.: 07.12.2020	Bülteimer	Nichtrostender Stahl / stainless steel A4 - 1.4401, 1.4404 oder 1.4571 f _{yk} >= 275 N/mm ² , f _{uk} >= 550 N/mm ²		
		Gepr.:		Titel:	Maßstab: 1:1 (A4)	
		Norm:		Kupplungshülse / coupler M22 SCH Ankers, Schöck		
		Friedrich Schroeder GmbH & Co. KG			Zeichnungs. Nr.:	Artikel: S9992VA
		58809 Neuenrade, Germany - Hönnestr. 24 Tel. +49 (0) 23 94 / 91 80-0 - Fax. +49 (0) 23 94 / 91 80-88 Info@schroeder-neuenrade.de - www.schroeder-neuenrade.de				
Zust.	Änd.	Datum	Name			

Artikelbezeichnung : Koppelbus M22x65mm
 Abmessung : M22x65mm
 Verbindungsart : Schraube 8.8 / Hülse / Schraube 8.8
 Hülse :
 Werkstoff : Schraube 8.8 / 1.4404 Chrage 072580
 Lieferant : Fa.Schroeder
 Kunde : SCH NL FA46993 S9992VA
 Prüfer : Suerbier
 Datum der Prüfung : 14.11.2020 100Stück
 Prüfungsgeschwindigkeit :

Nr.	Probennummer	l ₀ mm	d mm	S ₀ mm ²	ReH MPa	R _m MPa	F _m N	Bemerkung
1	1	600.0	36.000	1017.88	-	197	200826	Unterlegscheibe gebrochen
2	2	600.0	36.000	1017.88	-	241	244824	Gewinde rausgebrochen

OSG
USG





Kunde:

Schöck

Bauvorhaben:

Position:

Koppelsustcoupler

Determination of the load capacity - axial load1. couplerSocket from solid rod M22, $D=36\text{ mm}$

1.4401, 1.4404 or 1.4171

 $\geq S275$, yield strength $f_{yk} = 275\text{ N/mm}^2$ tensile strength $f_{uk} = 550\text{ N/mm}^2$

$$A_s = \pi \frac{D^2 - d^2}{4} = \pi \frac{36^2 - 22^2}{4} = 638\text{ mm}^2$$

calculation based on DIN EN 1992-4:Design of fastenings for use in concrete

characteristic resistance against axial load

$$N_{Rk} = A_s \cdot f_{uk} = 638\text{ mm}^2 \cdot 550\text{ N/mm}^2 \\ = 351\text{ kN}$$

safety factor $\gamma_s = 1,2 \cdot 550\text{ N/mm}^2 / 275\text{ N/mm}^2 = 2,4$

design resistance $N_{pd} = 351\text{ kN} / 2,4 = 146,3\text{ kN}$
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