
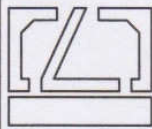


Works test certificate for tape

No. 6.417

Article:	Tank dipping tape of carbon steel according to IPM-Specification in Brass frame with dip weight "B1m-IPM"	
Type No.:	414MS-IPM8 / 20 m with dip weight "B1m-IPM"	
Material:	carbon steel dimension: 13 x 0,25 mm	
Graduation:	front side: mm reverse side: -----	
Inscription:	IPM 8, 15 N, 20°C, Length, Richter, Made in Germany	
Accuracy:	+ / - 1,5 mm on total length upto 30 m, at longer tapes for each further 30 m interval and part thereof the same tolerance is allowed	
Dip weight:	Dip weight of brass, torpedo pattern, weight 675 g, length 152,4 mm is included in measurement	
Connection:	tape end is fitted with a brass hook with locking screw in order to prevent the dip weight from accidentally loss	
Frame:	Brass frame with oblique wooden handle, metal winding core and metal winding arm for rewind of the measuring tape	
Type of measure	stroke – end measure, because the end graduation of the dip weight is determined by a plane surface and the end mark at the nominal length is determined by a stroke	
Test procedure	The measuring points specified in the test certificate have been test on a 30 m length comparator by means of Laser Interferometer System "ZLM 700" (Nr.: 400402)	
Coefficient of ther-mal expansion	Carbon steel: $11,5 \times 10^{-6}$	
Errors:	The errors are indicated in + or – to the corresponding metre value. "+" before the value means, the controlled measuring tape is to long "- " before the value means, the controlled measuring tape is to short	
Errors found:	The errors are listed on the attached report	
Unsecurity:	the unsecurity in the error determination is +/- 0,2 mm	
Date:	Examiner:	Signature:
30.08.2017	Hösl Oliver	 FRIEDRICH RICHTER Meßwerkzeuge GmbH & Co KG 95469 SPEICHERSDORF



Messprotokoll

Laserwegmesssystem ZLM

Datum: 30.8.2017

Uhrzeit: 9:30:56

Bearbeiter: Hösl

Messgerät: ZLM Weg

Messobjekt: 6.417

Blatt: 1 von: 1



Weg-Punktnummer-Diagramm

Weg (Meter)	Wegabweichung (Millimeter)
8.0000000000	-0.269
13.0000000000	-0.340
18.0000000000	-0.543