



MARINE DIVISION

Certificate number: 02966/F0 BV

File number: ACM 103/270/1 - 4

Product code: 06301

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**KTR KUPPLUNGSTECHNIK GmbH**

Rheine - GERMANY

*for the type of product*

**TOOTHED SHAFT COUPLINGS**

BOWEX

**Requirements:**

BV Rules for the Classification of Steel Ships.

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 09 Nov 2014**

**For BUREAU VERITAS,**

At BV HAMBURG, on 09 Nov 2009,

Adama Diene



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site [www.veristar.com](http://www.veristar.com). Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

## **THE SCHEDULE OF APPROVAL**

### **1. PRODUCT DESCRIPTION :**

**"BOWEX"**

Type: Junior Range, Junior-M Range, M, I, AS, Spec.I, SG, SSR, Spec.I/CD, ELASTIC HE, FLE-PA, FLD, and SD.

#### **1.1 ELASTIC – HE / File Number: ACM 103/270/1**

Size	Shore Hardness	Nominal Torque [Nm]
42 HE	40	130
	50	150
	65	180
48 HE	40	200
	50	230
	65	280
65 HE	40	350
	50	400
	65	500
G 65 HE	40	430
	50	500
	65	620
80 HE	40	750
	50	950
	65	1200
G 80 HE	40	1250
	50	1600
	65	2000
100 HE	40	2000
	50	2500
	65	3200
125 HE	40	3000
	50	4000
	70	5000
G 125 HE	40	4000
	50	5200
	70	6500
150 HE	40	5500
	50	7000
	70	9000

#### **1.2 Plug-in Couplings St. AS, Special I, M/I, SG, SSR, SD, FLD. / File Number: ACM 103/270/2**

Size	Nominal Torque [Nm]
14	10
19	16
24	20
28	45
32	60
38	80
42	100
45 / 48	140
65	380
80	700
100	1200
125	2500

**1.3 Plug-in Coupling and Junior M. / File Number: ACM 103/270/3**

Size	Nominal Torque [Nm]
Junior 14 / M-14	5
Junior 19 / M-19	8
Junior 24 / M-24	12

**1.4 FLE-PA / File Number: ACM 103/270/4**

Size	Nominal Torque [Nm]
28	75
32	135
48	240
T 48	300
T 55	450
65	650
T 65	800
T 70	1000
80	1200
T 80	1500
100	2050
T 100	2500
125	4250

**2. DOCUMENTS AND DRAWINGS :**

According to catalogue K.08-01-GB.

**3. TEST REPORTS :**

Nil.

**4. APPLICATION / LIMITATION :**

4.1 These couplings may be used for propulsive plants only if arrangements are made to deal with the propeller thrust.

4.2 Technical characteristics of the couplings to be considered are those mentioned in the below mentioned catalogue.

4.3 The allowable misalignment has to be according to the Manufacturer's catalogue.

4.4 If the flexible couplings are used for the transmission of propulsion power on ships having only one propulsion engine, the flexible coupling is to be fitted with a torsional limit device or other suitable means to lock the coupling should the flexible component break.

**5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 The couplings are to be manufactured, examined and tested by the manufacturer in accordance with the approved type described in this certificate and in accordance with Bureau Veritas Rules and Regulations stated on the front page of this certificate. Arrangements shall be made for a Society's Surveyor to attend the tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme, BV Mode I, has been arranged, in order to issue the Bureau Veritas certificate for the approved type to be fitted on board ships classed with Bureau Veritas.

5.2 **KTR Kupplungstechnik GmbH** has declared to Bureau Veritas that the products detailed in this certificate are manufactured at the production site stated on the front page of this certificate.

5.3 The inspection made at the manufacturer premises does not prejudice of any additional equipment, which may be required for some specific applications, in order to comply with the related Rules of the Society.

5.4 If required by the Rules, each of attached piece of equipment is to be individually inspected at workshops by the Society Surveyors.

**6. MARKING OF PRODUCT :**

- Manufacturer's name or trademark
- Serial number
- Nominal torque
- Maximum speed
- Bureau Veritas' Marks
- Size

**7. OTHERS :**

7.1 It is understood that **KTR Kupplungstechnik GmbH – Rheine / Germany** will give the shipyards and the related subcontractors all the relevant information for the proper fitting and uses of the product covered in this Type Approval Certificate. This information has to include the conditions stated in the Certificate.

It is also understood that Bureau Veritas remains rightfully entitled to perform any check or test on the product at any time.

7.5 This certificate supersedes Type Approval Certificate N°02966/E0 BV issued on 6 Nov. 2002.

\*\*\* END OF CERTIFICATE \*\*\*