

# 4.3

**Coupling assembled**

MAN Turbo AG Schweiz

Balancing-Record

Project-Name: Kosair 2004  
 Order-No.: 3071502  
 Project-No.: N.7100175.19  
 Drawing-No.: 837076910  
 Material-No.: 70104977  
 WP-No.: 49882/49383-7+2  
 Operator: H. Karppe

014  
0148

Rotor file: KUKO-D.125  
 Rotor ID: COUPLI.COM.D.125  
 Date: 19.05.2005

15:21

Rotor data:

Balancing mode: 2 planes



a = 210. mm      b = 580. mm      c = 210. mm  
 r\_1 = 120. mm      n\_set = 500 1/min      r\_2 = 120. mm

Correction: rem. mass, polar      Correction: rem. mass, polar

Tolerance: 272. gmm      Tolerance: 272. gmm  
 Max. tolerance factor: 10.0

Results of measurement:

|          |                 |                      |
|----------|-----------------|----------------------|
| Run 1    | 15:21           | Speed: 502 1/min     |
| Plane 1: | -4.50 g at 23°  | 2.0 * tol = 540. gmm |
| Plane 2: | -6.17 g at 106° | 2.7 * tol = 741. gmm |
| Run 2    | 16:56           | Speed: 502 1/min     |
| Plane 1: |                 | in tol: 71.5 gmm     |
| Plane 2: |                 | in tol: 29.3 gmm     |

MAN TURBO AG, Schweiz  
 Hardstrasse 319  
 8005 Zürich, Switzerland

014  
 H. Karppe  
 23.05.2005





Protokoll mechanische Rundlaufkontrolle  
Record of mechanical run out  
Procès verbal de contrôle du battement mécanique

Nr.: RR 001074

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|                                        |                   |                                                            |                  |
|----------------------------------------|-------------------|------------------------------------------------------------|------------------|
| FAUF Nr.<br>Order No.<br>No. d'ordre   | 3071502           | Mat. Nr.<br>Mat. No.<br>No. de mat.                        | 10104977         |
| Bezeichnung<br>Item<br>Part.           | Kupplung komplett | Zchg. Nr./Index<br>Drg. No./Index<br>No. du dessin/Index   | 837016910        |
| Proj. Nr.<br>Proj. No.<br>No. de proj. | N.7100175.19      | Werkstoff<br>Material<br>Matériau                          | 1.6582 34CrNiMo6 |
| Kennwort<br>Plant<br>Installation      | Kosair 2004       | Kd-Auftrag Nr.<br>Cust. Order No.<br>No. d'ordre d. client | —                |

Spezifikation  
Specification  
Spécification

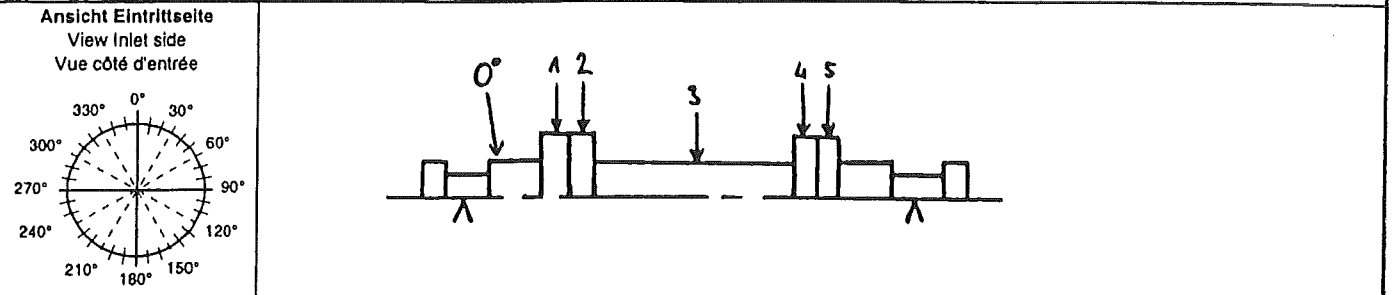
gemäss Zeichnung / according to drawing / conforme au dessin

Typ  
Type

D125

Rotor  
Shaft  
Arbre

WP Nr./Ident. Nr. 49882/49383-1+2



| Zustand Rotor<br>State of rotor<br>Etat du rotor |   | Messstellen / Measuring points / Points de mesure |      |      |      |     |   |   |   |   |    |    |    | Name / Datum<br>Nom / Date |  |
|--------------------------------------------------|---|---------------------------------------------------|------|------|------|-----|---|---|---|---|----|----|----|----------------------------|--|
|                                                  |   | 1                                                 | 2    | 3    | 4    | 5   | 6 | 7 | 8 | 9 | 10 | 11 | 12 |                            |  |
| F                                                | R | 18                                                | 18   | 10   | 6    | 16  |   |   |   |   |    |    |    | 13.05.05                   |  |
|                                                  | < | 45°                                               | 95°  | 110° | 180° | 70° |   |   |   |   |    |    |    | U. Uena!                   |  |
| G                                                | R | 18                                                | 18   | 6    | 10   | 14  |   |   |   |   |    |    |    | 18.05.05                   |  |
|                                                  | < | 50°                                               | 105° | 145° | 160° | 55° |   |   |   |   |    |    |    | U. Uena!                   |  |
|                                                  | R |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |
|                                                  | < |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |
|                                                  | R |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |
|                                                  | < |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |
|                                                  | R |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |
|                                                  | < |                                                   |      |      |      |     |   |   |   |   |    |    |    |                            |  |

R = Rundlauf / Run out / Battement [  $\frac{1}{1000}$  mm DA \_\_\_\_ ]; < = Hochpunkt / High point / Haut point [ ° ]

Rotor

A - Nur Welle / Shaft only / Seulement l'arbre  
B - Räder aufgezogen; Beschauelt / Wheels shrunk; Bladed / Roues montées; Alletées  
C - Vor dem N.T. Wuchten / Before L. speed balancing / Avant équilibrage à B. vitesse  
D - Nach dem N.T. Wuchten / After L. speed balancing / Après équilibrage à B. vitesse  
E - Eingangs Kontrolle

Zwischenwelle / Shaft Intermediate /  
Arbre intermédiaire

F - Vor dem Verbohren / Before drilling /  
Avant percer  
G - Nach dem Verbohren / After drilling /  
Après percer

Befund - Conclusion

☒ Werte entsprechen der Zeichnung / Values according to drawing / Valeurs suivant au dessin  
☐ Werte werden akzeptiert Datum: \_\_\_\_\_ Unterschrift: \_\_\_\_\_

|                                        |                                                      |                                               |
|----------------------------------------|------------------------------------------------------|-----------------------------------------------|
| Prüfstelle<br>Inspection / Examination | Abnahme durch / Authorized Inspection / Contrôle par | MAN Turbomaschinen AG Schweiz<br>QS / QA / AQ |
| Ko. St./Sect.No. B-353                 | Gesellschaft/Agency/Société                          | Ko.St. / Sect. 014                            |
| Name/Nom Th. Morger                    | Unterschrift/Signature                               | Name/Nom H. Mohr                              |
| Datum/Date 23. Mai 2005                | Datum/Date                                           | Datum/Date 25.05.2005                         |