

# Test Report

No. TDB 0403 dated 25.04.2000

for application of Annex VII Directive 71/320/EEC

## 1 IDENTIFICATION

### 1.1 Axle

Manufacturer: BPW Bergische Achsen  
Kommanditgesellschaft  
D-51674 Wiehl

Make: BPW

Type: PS 38

Model: -

Technically permissible axle load  $P_e$ <sup>1)</sup>: 3800 daN

### 1.2 Brake

Manufacturer: See 1.1

Make: BPW

Type: N 3006-3

Model: -

Technically permissible camshaft  
input torque  $C_{max,e}$ : 660 Nm  
(for calculation: 550 Nm at 6,5 bar)

Brake drum - Internal diameter: 300 mm

- Mass: 17,5 kg

- Material: Cast iron (grey cast iron)

Brake lining - Manufacturer: Federal-Mogul Friction Products GmbH  
D-51709 Marienheide

- Make,- Type: FERODO BERAL, 1548

- Identification: Type indication at front

- Width: 60 mm

- Thickness: 5 mm

- Surface area  $F_e$ : 320 cm<sup>2</sup> | 345 cm<sup>2</sup>

- Method of attachment: Rivited | adhesive

Brake geometry: See appendix 1 dated 30.10.1998  
See appendix 2 dated 29.05.1996

### 1.3 Wheel (Twin)

Rim diameter  $D_e$ : 355,6 mm (14")

Dimensions: See appendix 1 dated 30.10.1998

<sup>1)</sup> See sheet 3/3

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**RWTÜV**

Manufacturer : BPW  
Type of axle : PS 38

#### 1.4 Tyres

Dynamic rolling radius  $R_e$   
at reference load  $P_e$ : 332 mm

#### 1.5 Actuation

Brake actuator - Manufacturer: WABCO  
- Type: Diaphragm brake actuator  
- Model: 12 (423 003 900 0)  
Lever length  $l_e$ : 150 mm

### 2 RECORD OF TEST RESULTS <sup>2)</sup>

(corrected to take account of rolling resistance  $\hat{=} 0,01P_e$ )

#### 2.1 In the case of vehicles of categories O<sub>2</sub> and O<sub>3</sub>

Test type:		0	I	
Annex VII, Appendix 1, point:		3.5.1.2	3.5.2.2/3	3.5.2.4
Test speed	km/h	40	40	40
Brake actuator pressure $p_e$	bar	4,1	-	4,1
Braking time	min	-	2,55	-
Brake force developed $T_e$	daN	2296	302	1493
Brake efficiency $T_e/P_e$	-	0,60	0,08	0,39
Actuator stroke $s_e$	mm	30	-	38
Camshaft input torque $C_e$	Nm	437	-	437
$C_{0,e}$	Nm	25	-	25

#### 2.2 In the case of vehicles of category O<sub>4</sub>: Not applicable

### 3 NAME OF TECHNICAL SERVICE CONDUCTING THE TEST

RWTÜV Fahrzeug GmbH  
Technischer Dienst für Bremsanlagen  
D-45307 Essen

### 4 DATE OF TEST: 04.07.1990

<sup>2)</sup> See sheet 3/3



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**RWTÜV**

Manufacturer : BPW  
Type of axle : PS 38

- 5 This test has been carried out and the result reported in accordance with Directive 71/320/EEC as last amended by Directive 98/12/EC and Annex VII, Appendix 1.

Essen, 25.04.2000



Dipl.-Ing. Kaesler

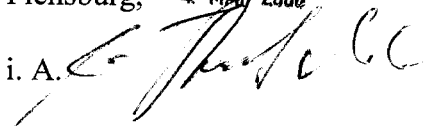


LABORATORY FOR VEHICLE TECHNOLOGY  
Testing Laboratory for Braking Systems  
according to Directive 71/320/EEC in the  
version of Directive 98/12/EC

- 6 **APPROVAL AUTHORITY, if different from the technical service**

Flensburg, 24. MAI 2000

i. A.



- 7 **TEST DOCUMENTS**

- / Appendix 1: Dimensions brake drum/wheel/tyre
- / Appendix 2: Brake geometry

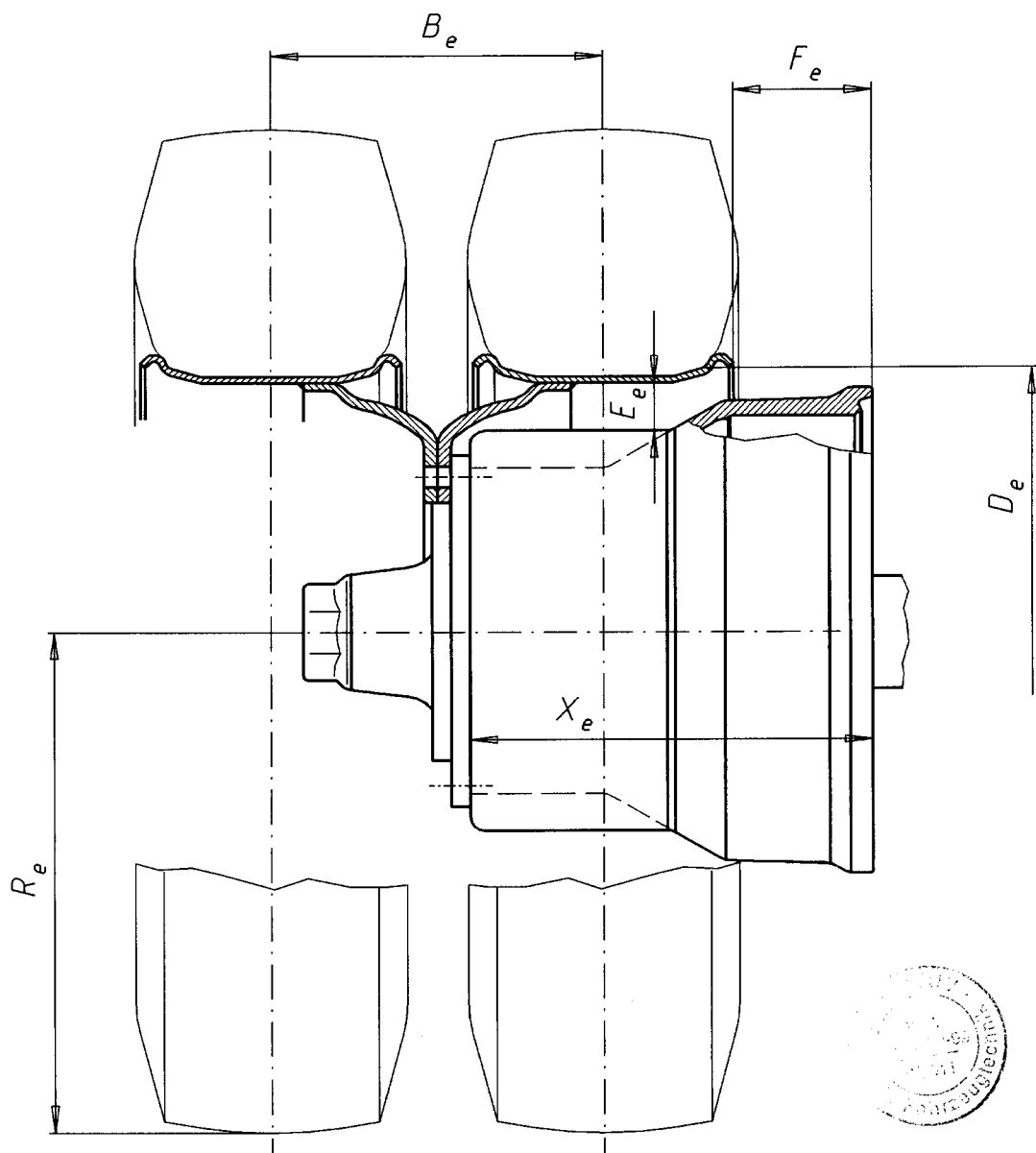
1) Calculation with  $g = 10 \text{ m/s}^2$

2) Rolling road dynamometer test;  $F_e = 345 \text{ cm}^2$



Abt. EZ  
Tag 30.10.98  
Bearb. Schöler

BPW BERGISCHE AXHSEN Kommanditgesellschaft D-51674 Wiehl



Drum- width $X_e$ (mm)	mass (kg)	Axle load $P_e$ (da N)	Tyre	Rim	$B_e$ (mm)	$R_e$ (mm)	$D_e$ (mm)	$E_e$ (mm)	$F_e$ (mm)
$\geq 244$	17,5	3800	205 R 14 C	6 J x 14	239	332	355	25	+56

Ersatz für  
Ersetzt durch



Appendix 2 to  
TEST REPORT NO. TDB 0403

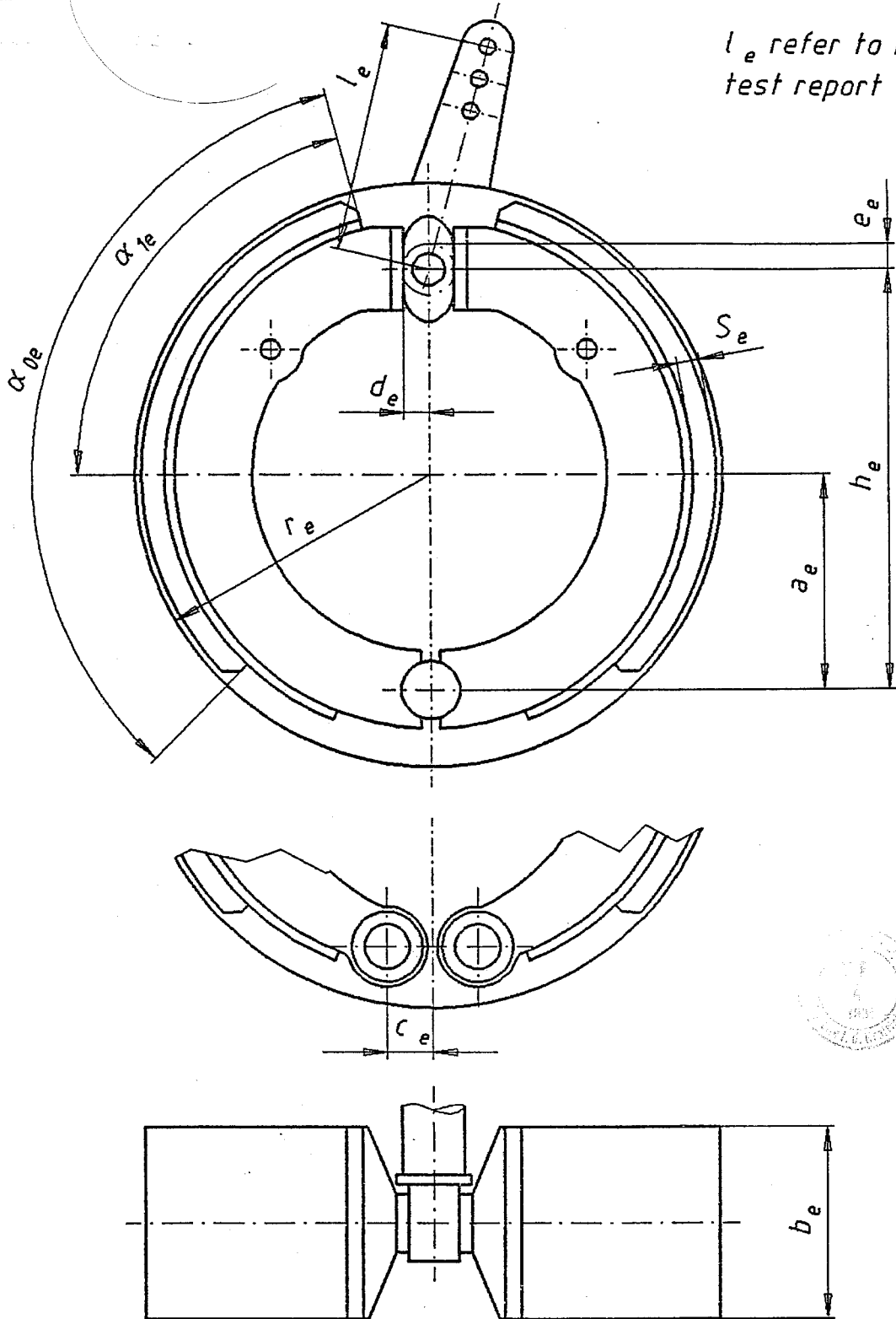
TE-2070.0

4 Blatt Bl.-Nr. 2

Abt. EE  
Tag 29.05.96  
Bearb. Schuster

BPW BERGISCHE ACHSEN Kommanditgesellschaft D-51674 WIEHL

$l_e$  refer to No.15. of  
test report



All dimensions except  $\alpha_{0e}, \alpha_{1e}$  and  $F_e$  in mm.  $F_e$  = braking surface per brake ( $\text{cm}^2$ ).

Type of brake	$a_e$	$h_e$	$c_e$	$d_e$	$e_e$	$\alpha_{0e}$	$\alpha_{1e}$	$b_e$	$r_e$	$F_e$		$S_e$
										rivited	adhesive	
N 2504-3	97,5	198	0	9	10	125°	60°	40	125	199	211	5
N 3006-3	122	242	0	11	10	115°	57°30'	60	150	320	345	5
N 3108-3	120	243	0	17	10,5	120°	57°	80	155	423	---	8
N 4008-3	160	325	30	17	13	115°	57°30'	80	200	548	---	8
N 4012-3	160	325	30	17	13	116°	58°	120	200	884	---	8

Ersatz für  
Ersetzt durch