

# Test Specifications for Injection Pump and Governor

## Injection Pump

PES 4 A 50 B 410 RS 17  
or RS 50

## with Governor

EP/MZ 60 A 57 d  
or A 58 d

## DAI Sheet

1,7 f

dated: Dec. 15th 1952

### A. Adjustment Data of the Injection Pump

Feed Begin at a Pre-stroke of 1.7 + 0.1 mm (from BDC)

1	2	3	4	5	6
Speed <small>r.p.m.</small>	Control Rod Travel <small>mm</small>	Feed Quantity <small>cm<sup>3</sup>/100 strokes</small>	Feed Quantity Differential <small>cm<sup>3</sup>/100 strokes</small>	Feed Quantity Drop <small>(between 1000 and 200 r.p.m.) cm<sup>3</sup>/100 strokes</small>	Pre-tension of Spring <small>(Adaptation Valve) mm</small>
1000	9	1.3-1.7		0.6	
	12	2.5-2.8	0.3		
	18	4.8-5.8			
200	9	1.0-1.5			

Adjust delivery of equal quantities within outlined  limits

### B. Adjustment Data of the Governor

1	2	3	4	5	6	7	8	9	10	11
Travel of Adaptation <small>mm</small>	Leak-proof Test		Point of Adjustment Control Rod Travel Limit		Control Rod Travel Test			Adaptation		
	Vacuum Drop <small>mm Water Col.</small>	Time Min. <small>sec.</small>	Vacuum <small>mm Water Col.</small>	Control Rod Travel <small>mm</small>	with Governor Design	Vacuum <small>mm Water Col.</small>	Control Rod Travel <small>mm</small>	Vacuum <small>mm Water Col.</small>	Control Rod Travel <small>mm</small>	
1.0+0.1	500-480	10	300	12.5	—	—	470 520 560 2000	8.6-12.5 6.5- 9.5 6.4- 8.3 2.3- 4.1	180 150 100 50	12.5 12.5-12.6 12.8-13.2 13.5-13.6

For Testing Control Rod Travel (column 4-11) n = 500 r.p.m.

### C. Adjustment of Injection Pump with Mounted Governor

0	1	2	3	4	5	6	7	8	9
Injection Pump	Adjustment of Full-Load Stop Screw			Testing of Feed Quantity Characteristics			Adjustment of Idling Stop		
	r.p.m.	Vacuum <small>mm Water Col.</small>	cm <sup>3</sup> /1000 strokes	r.p.m.	Vacuum <small>mm Water Col.</small>	cm <sup>3</sup> /1000 strokes	r.p.m.	Vacuum <small>mm Water Col.</small>	Control Rod Travel from Full-Load to Idling <small>mm</small>
RS 17 or RS 50	1000 1000	300 180	29-30 29-30	500 750	50 125	31-34 29-32	0	0	6.0-6.5

The values in col. 3 and 6 are obtained by dividing the total quantity through the number of pump elements