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Mr T J Platt
Jetseal
38 Hilltop Road
Ferndown
Dorset BH22 9QS

Direct Line: 577064
Ref: FAR/RR

Date: 17 December 1991

Dear Mr Platt,

RE: JETSEAL (Mk II) - LIFE CYCLE TESTS

Please find enclosed the test results for the JETSEAL (Mk II) diaphragm valve. The tests show that the valve underwent 500,000 cycles (approx. 70 years simulated life operation) without any adverse effects. The results show that the valve operated as efficiently `as new' after approx. 70 year simulated life. From the visual and load tests it is obvious that the valve could probably continue for another 500,000 cycles. However, we would have to review some of our test equipment if your required us to continue the test (our equipment has begun to wear out!).

We look forward to receiving your further instructions.

Yours sincerely,

R. Rue

R Rue, C.Eng F.I.Mech E
Design Consultant

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TEST REPORT

JETSEAL VALVE - HYDROSTATIC TEST

When tested under identical simulated working conditions the following observations were made:-

i) The Jetseal Valve Mk 2 - Flexible Diaphragm, began to leak at a hydrostatic pressure of approx 33 bar (500 psi).

ii) The 1212 Part 2 Brass Ball Valve began to leak at a hydrostatic pressure of approx. 18 bar (275 psi).

The results indicate an increased sealing capacity by the Jetseal Valve of 185% greater than the standard valve.

Manufacturer's Note - the valve seating material used in the Jetseal Valve has a 'no wear' characteristic compared to the conventional rubber used in the standard type of valve and removes the need for any maintenance within the life of the valve. Hence the Jetseal valve is the perfect solution to the 'fit and forget' applications.

R. Rue.

R Rue, C Eng F.I.Mech E
Design Consultant

29.10.91

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JETSEAL (MK II) DIAPHRAGM VALVE & SEAT

ENVIRONMENTAL TEST - LIFE CYCLE TEST

Introduction - The JETSEAL (Mark II) diaphragm valve was life cycled tested under simulated load conditions (dry, ambient conditions) and then pressure and load tested.

Test Results

i) The JETSEAL (Mk II) underwent 500,000 cycles under simulated load conditions and then was visually inspected. The valve showed no indication of distortion or wear on either the diaphragm or valve seat.

ii) The JETSEAL (Mk II) was pneumatically pressure tested at 6.8 bar (100psi) after completing 500,000 cycles and showed no indication of leakage.

iii) The JETSEAL (Mk II) was loaded after completing 500,000 cycles and no change in (required sealing load was observed). (Air pressure 6.8 bar).

Observations - From the test results obtained it is concluded that the life expectancy of the JETSEAL (Mk II) is in excess of 500,000 cycles which corresponds to a typical operational life of 70 years assuming an average daily requirement of 20 operations/day.

The material specifications for the JETSEAL (MKII) indicate that the results obtained at ambient conditions could be applied to the valve over the temperature range 0-100°c without any significant reduction in life expectancy.

The use of pneumatic test procedures ensures the most vigorous conditions have been applied ('air leaks easier than water').

R. Rue.

R Rue, C.Eng, F.I.Mech.E
Design Consultant

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