

CAST IRON PENSTOCK SPECIFICATION

Adams' penstocks conform to the requirements of BS 7775 (1995) Specification for Penstocks, and meet the performance requirements of AWWA C501, the American standard for Penstocks. The category footnotes refer to the applicable sections of BS 7775 and other standards.

FRAMES

Cast Iron to BS EN 1561 grade 250 (as standard).

Frames are designed and manufactured to withstand the stresses resulting from the application of the maximum working pressure head condition and incorporating a minimum safety factor of 5 : 1.

The frame is also designed to limit deflection consistent with maintaining all round seal face contact.

The frame has a flat back for wall fixing, (using suitable grout), with fixing holes positioned and sized to facilitate securing in position and preventing movement.

(BS 7775:Page 15 Table 8:Page 6:Clause 2.1.3.2:Para (b)) (BS 5950:Part 2)

DOORS

Cast Iron to BS EN 1561 grade 250 (as standard).

The door is designed and manufactured to withstand the stresses resulting from the application of the maximum working pressure head condition and incorporating a minimum safety factor of 5 : 1.

The door is also designed to limit deflection consistent with maintaining all round seal face contact.

The door is suitably ribbed and incorporates a nut pocket to accommodate the door nut for either rising or non-rising applications.

Door guides are an integral part of the frame and provide the control and guidance to the door travel. They are designed to permit free movement while restricting any door chatter when moving or in its open position.

Pages 6/7:Clause 2.1.3.4 & 2.1.4.2.:Para (c)

SEALS

Manufactured in Gunmetal to BS1400 LG2 or Brass to BS2874 CZ114 (as standard).

These materials offer a combination of properties that make them an excellent metal seal face material. It has good bearing characteristics, is hard wearing and non-corrosive.

The sealing faces are chemically bonded and riveted to the frame on three faces (flush invert type) or four faces (rebate invert type), machined smooth and flat and finally hand scraped to ensure all round sealing integrity.

(Page 15:Table 8). (Page 6:Clause 2.1.3.5.)

WEDGES

Manufactured in Cast Iron to BS EN 1561 grade 250 (minimum).

Wedge adjusters are provided to ensure full face seal contact under operational head conditions.

The number of wedges are determined by the aperture size and head requirements. They are pre-set at the factory and should not require further adjustment at site.

(Faced wedges using Gunmetal is optional at extra cost).

(Page 6:Clause 2.1.3.6.)

FLUSH INVERT

All Adams cast iron penstocks are provided with a flush invert as standard, however a rebate type invert design is available upon request. The flush invert design can accommodate rebated, wall or direct floor fixing and utilises a neoprene seal.

(Page 2:Clause 1.3.2.1.) (Page9:Table 1)