OPERATING AND SERVICING

INSTRUCTIONS FOR

PLENTY FILMET FILTERS

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PLENTY FILMET FILTER

SECTION 1 - GENERAL DESCRIPTION

PLENTY FILMET FILTERS

1-1 The Plenty Filmet filter is a simple robust construction, the large filtration area and simplicity of maintenance are the prime features of the filter.

1-2 The filter whether for liquid or gas duties incorporates the quick release cover sealed against internal pressure by an 'O' ring seal which remains in position during the basket servicing, allowing for an unskilled operator to safely and easily remove the basket without the need for special tools.

1-3 The basket assembly is designed so that it is easily manhandled, the flow being from the inside of the basket to the outside, ensuring that all trapped debris is retained inside the basket.

SECTION 2 - INSTALLATION

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2-1 Check the size and height of the filter flanges before fitting in place, as the weight of the filter and flow pipes must not be taken on the filter branches for excessive lengths. It is acceptable to support the pipework adjacent to the filter with no filter support. On larger sizes it is more desirable to support the filter in addition to the pipework.

2-2 Ensure the filter is installed the correct way round as it is essential the liquid flows from inside the basket to the outside, a direction arrow is on the filter body.

2-3 Sufficient clearance must be available above the filter to allow the covers and baskets to be withdrawn, in the case of large filters lifting facilities are important for installing the filters in the pipeline.

2-4 Ensure sufficient access is available to operate valves, air vents and D.P. gauge valves (if fitted).

2-5 Provision must be made for isolating the filter from the flow and for draining the filter body.

SECTION 3 - COMMISSIONING

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3-1 When commissioning a filter after an extended period of storage, it is possible for the cover 'O' seal to leak due to the seal having deformed after prolonged compression. The problem can be easily rectified by replacement of the seal, the 'O' ring grooves must be kept free of grit; this could also cause cover leakage on commissioning if filters are stored in dusty areas with covers not in position.

3-2 Filters should be checked for removal of construction debris as soon after start-up of a new system as is practical.

3-3 Gas or liquid filters which are fitted with 1-5 micron elements should be carefully examined if differential pressures have exceeded 20 psi during operation; a 1-5 micron standard of filtration may be impossible if excess differentials cause any deformation to the filter support cage.

SECTION 4 - OPERATING INSTRUCTIONS

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4-1 The Plenty Filmet filter is a design requiring little attention during operation, hand pressure is enough to turn the 'T' spindle in the bridge to open or close the cover against the 'O' ring seal.

4-2 No special tools are required for basket removal.

4-3 If the plant has been out of service for some considerable time, it is possible for the filtrant to solidify in the basket, the basket should be removed and cleaned, see Section No. 5 for basket removal and replacement.

4-4 Before putting the filter on flow, check:-

4-5 The 'T' spindle is tight in the cover bridge.

4-6 The drain valve (if fitted) is closed.

4-7 The isolating valves in the flow line are open.

4-8 The air vent valve (if fitted) is closed after releasing any trapped air in the filter.

4-9 Open the pressure gauge valves (if fitted) and check the reading.

4-10 Check the cover for leaks.

SECTION 5 - MAINTENANCE INSTRUCTION

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5-1 All screwed spindles and nuts must be cleaned and well oiled.

5-2 Check all valves are in good working order.

5-3 Check the filter for any leaks.

5-4 The frequency at which the baskets require cleaning will be governed by the filtrant, the degree of filtration and flow.

5-5 The basket should be cleaned when the pressure loss across the filter has risen to the pressure stated in the Technical Particulars.

5-6 The following procedure should be followed for safety and speed of basket changing.

5-7 Ensure the main valves are closed isolating the filter from the line flow.

5-8 Release the internal pressure in the filter body. Turn the 'T' spindle in the filter bridge in an anti-clockwise direction releasing the load holding the cover in place, slacken the spindle sufficiently to allow one drop nose bolt to be removed, hinge back the bridge to clear the cover, lift the cover off the body by inserting the flat end of the drop nose bolt under the lug on the side of the cover.

5-9 The cover is designed to reduce the spillage to a minimum when lifting the basket assembly out of the body, using the basket handle.

5-10 Place a clean rag or other material over the filter to prevent ingress of dirt during the basket cleaning.

5-11 The basket should be handled carefully during cleaning operation. It should be cleaned using high pressure steam, water or air.

5-12 Carefully examine the basket and mesh (if fitted) for fractures, tears, or other damage. Renew suspect items, see Section 6.

5-13 To replace the filter basket in the body, the following procedure should be followed:-

5-14 Remove the 'O' ring seal from the cover and carefully examine for any pitting, deformation or cuts. Replace any suspect seal.

5-15 Clean the seal face on the cover, lightly smear with grease and replace the 'O' ring seal on the cover.

5-16 Ensure that the basket seat in the body and the basket ring are clean. Install the basket assembly with the handle across the line of the branches.

5-17 Examine the 'O' ring mating surface on the filter body and ensure that it is perfectly clean and free from rust; then lightly smear with grease.

5-18 Replace the cover, with the 'O' ring seal in position.

5-19 Hinge the bridge back into position.

5-20 Replace the drop nose bolt.

5-21 Tighten the 'T' spindle by turning in a clockwise direction. Hand tightness is all that is required. Tommy bars or pipe lengths are not to be used when tightening up the 'T' spindles. Maximum hand pressure only should be applied.

5-22 Restore the filter to service and check the covers for any leaks.

SECTION 6 - BASKET AND INSERT

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6-1 The recommended method of inserting a mesh into a basket is as follows:-

6-2 Place mesh insert with the rim down on a clean flat surface.

6-3 Carefully lower the basket down over the mesh insert keeping the walls of the basket vertical and ensuring that the handle slots in the insert rim are aligned with the handle fastening pins on the basket. The larger the basket and mesh the greater the care needed.

6-4 When the basket has been lowered completely over the insert, lift the basket and mesh over so that the handle fixing pins are upwards.

6-5 Gently "bounce" the basket and mesh on a flat surface so that the insert rim settles down over the basket rim. DO NOT ATTEMPT TO PUSH THE INSERT DOWN INTO THE BASKET WITH ANY IMPLEMENT WHICH COULD CAUSE DAMAGE TO THE MESH INSERT BASE.

6-6 Put handle onto retaining pins and tighten the nuts so that the basket and mesh can be safely lifted as an assembly.