15. A flow bend in wellhead piping comprising the flow directing apparatus of any one of claims 1 to 14.

16. The flow directing apparatus of any one of claims 1 to 15 wherein the pad pressure is maintained at a threshold pressure, variation therefrom being indicative of insert failure.

~~17. A flow directing apparatus for conveying a fluid flow comprising:~~

~~a housing forming a pressure boundary; and~~

~~a flow directing insert fit sealably and wholly within the housing for forming a pressure chamber about the insert and between the insert and the housing, the insert having an inlet end for receiving the fluid flow at a process pressure and a discharge end for discharging the fluid flow,~~

~~wherein the pressure chamber has a pad pressure, a differential pressure between the pad pressure and the process pressure controlling a magnitude of pressure-induced stress in the insert.~~

~~18. A flow directing apparatus for conveying a fluid flow comprising:~~

~~a flow directing insert fit having at least a first end and a second end for conveying the fluid flow therebetween; and~~

~~an integrated housing for receiving the insert wholly within, the housing having an first port and a second port, the housing forming a pressure boundary between~~

~~the first and second ports and the insert being fit sealably within the housing between the first and second ports.~~

~~19. The flow directing apparatus of claim 18 wherein said housing further comprises:~~

~~a first opening on the housing; and~~

~~a first body fit to the first opening for securing and sealably fitting the first end of the insert thereto and forming the first port.~~

~~20. The flow directing apparatus of claim 19 wherein said housing further comprises:~~

~~a second opening on the housing; and~~

~~a second body fit to the second opening for securing and sealably fitting the second end of the insert thereto and forming the second port.~~

~~21. The flow directing apparatus of claim 20 wherein said housing further comprises:~~

~~a third sealable opening on the housing body for accessing the insert.~~

~~22. The flow directing apparatus of claim 18 wherein:~~

~~the first port is an outlet port;~~

~~the second port is an inlet port; and~~

~~fluid flow from the inlet port flows to the first end of the insert and the outlet port receives fluid flow from the discharge end of the insert.~~

~~23. The flow directing apparatus of claim 19 wherein the first end of the insert is secured and sealably fit to the first body.~~

~~24. The flow directing apparatus of claim 23 wherein the first end of the insert further comprises a flange for securing and sealably fitting to the first body.~~

~~25. The flow directing apparatus of claim 24 wherein the flange of the first end of the insert is sealably secured to the first body using a ring seal and a retainer ring.~~

~~26. The flow directing apparatus of any one of claims 23 to 25 wherein said housing further comprises a second opening on the housing; and a second body fit to the second opening for securing and sealably fitting the second end of the insert thereto and forming the second port; wherein:~~

~~the second end of the insert is secured and sealably fit to the second body.~~

~~27. The flow directing apparatus of claim 26 wherein the second end of the insert further comprises a flange for securing and sealably fitting to the second body.~~

~~28. The flow directing apparatus of claim 27 wherein the flange of the second end of the insert is sealably secured to the second body using a ring seal and a retainer ring.~~

~~29. The flow directing apparatus of claim 25 or 28 wherein said retainer ring comprises two or more sectional pieces.~~

~~30. A method for assembling a flow directing apparatus, said apparatus comprising a housing and a flow directing insert, the housing having at least a first and a second opening, the insert having a first and a second end, the method comprising:~~

~~inserting said insert into the housing through one of the at least first and second opening, such that the first end of the insert is positioned at the first opening and the second end of the insert is positioned at the second opening;~~

~~sealably securing the first end of the insert to a first body;~~

~~sealably securing the second end of the insert to a second body;~~

~~sealing the first body to the first opening;~~

~~sealing the second body to the second opening for directing fluid flow through the insert between the first and second bodies.~~