According to a first aspect of the invention, there is provided a pressure containment device for sealing around a rotating drill pipe during drilling of a well bore, comprising an actuator assembly and a seal assembly, the actuator assembly being operable to engage with the seal assembly to prevent significant rotation of the seal assembly with respect to the actuator assembly and to force the seal assembly into sealing engagement with a drill pipe mounted in the pressure containment device, the seal assembly comprising a tubular seal sleeve having a radially inward portion made from a non-elastomeric polymer, and a radially outward portion made from an elastomer.

Also disclosed is~~we provide~~ a pressure containment device for sealing around a tubular body, the pressure containment device comprising an actuator assembly and a seal assembly, the actuator assembly being operable to engage with the seal assembly to prevent significant rotation of the seal assembly with respect to the actuator assembly and to force the seal assembly into sealing engagement with a tubular body mounted in the pressure containment device, the seal assembly comprising a tubular seal sleeve having a radially inward portion made from a non-elastomeric polymer, and a radially outward portion made from an elastomer.

The invention provides a dynamic/active sealing mechanism with a non-elastomeric seal which will seal on any tubular OD which passes through the sealing element, and is an active sealing bearing-less (i.e. no bearing assembly present in the design) assembly. By virtue of the use a non-elastomeric polymer as the radially inward portion of the seal sleeve, the wear properties of the seal assembly may be improved and the frictional forces between the seal assembly and the tubular body reduced.

In one embodiment, the actuator assembly includes an annular packing unit and an actuator operable to reduce the internal diameter of the annular packing unit.

In this case, advantageously, the seal sleeve is in use positioned generally centrally of the packing unit so that the packing unit surrounds at least a portion of the seal sleeve.

In one embodiment, the actuator comprises a piston movable generally parallel to a longitudinal axis of the pressure containment device by the supply of pressurised fluid to the pressure containment device.

The radially inward portion of the seal sleeve may be made from one of polytetrafluoroethylene (PTFE) or Teflon ™, a PTFE-based polymer or ultra-high molecular weight polyethylene (UHMWPE).

The invention can thus use a simple inexpensive fluid, such as but not limited to, drilling fluid, to lubricate the contact area between the tubular and the sealing face of the invention.

The present containment device may be a blowout preventer.

According to a second aspect of the invention, there is provided a method of containing pressure in a well bore, a drill pipe extending into the well bore, the method comprising mounting a pressure containment device around the drill pipe, the pressure containment device comprising an actuator assembly and a seal assembly, the seal assembly comprising a tubular seal sleeve having a radially inward portion made from a non-elastomeric polymer, and a radially outward portion made from an elastomer, wherein the method comprises operating the actuator assembly to engage with the seal assembly to prevent significant rotation of the seal assembly with respect to the actuator assembly and to force the radially inward portion of the seal sleeve into sealing engagement with the tubular body, whilst allowing rotation of the drill string relative to the pressure containment device.

Also disclosed iswe ~~provide~~ a method of containing pressure in a well bore, a tubular body extending into the well bore, the method comprising mounting a pressure containment device around the tubular body, the pressure containment device comprising an actuator assembly and a seal assembly, the seal assembly comprising a tubular seal sleeve having a radially inward portion made from a non-elastomeric polymer, and a radially outward portion made from an elastomer, wherein the method comprises operating the actuator assembly to engage with the seal assembly to prevent significant rotation of the seal assembly with respect to the actuator assembly and to force the radially inward portion of the seal sleeve into sealing engagement with the tubular body.

The step of operating the actuator assembly may comprise the supply pressurised fluid to the pressure containment device.

The method may further comprise varying the force exerted on the tubular body by the seal sleeve by varying the pressure of fluid supplied to the actuator assembly.

The invention thus provides a method to vary the contact area of the sealing element-tubular interface by regulating the hydraulic pressure of the active/dynamic seal.

The invention advantageously provide the necessary annular clearance to drift a tubular or drillpipe tool joint when the hydraulic circuit pressure that energizes the sealing mechanism is not applied. In other words, when the actuator assembly is not operated to force the seal assembly into engagement