PACKER

This invention relates to a packer and more particularly to a packer for providing a seal between two joints and more particularly still to a packer for providing a seal between two concentric tubular members of a telescopic joint and further to a system for monitoring wear or said packer as the tubular members move relative to each other.

When recovering hydrocarbons such as oil and gas from reservoirs which are located subsea, it is necessary to provide a stable pathway for the recovered fluids from the reservoir to the surface. This may involve the use of a fixed platform or rig which extends from the sea bed to the surface with a string of pipes or risers extending between the infrastructure permanently installed subsea and the platform. The infrastructure may be for example a subsea christmas tree providing an assembly of valves, spools and fittings for intervention into the well below.

However in deeper water it is not always practical to provide fixed moorings between the surface platform and the seabed. In these cases a floating platform such as an FPSO may be used with the top side processing equipment provided on the deck of the FPSO and a casing or riser string provided between the FPSO and the subsea infrastructure.

Movement of the FPSO due to heave, surge or sway caused by localised swells and weather conditions must be accommodated as any such movement at the surface will be transferred into the casing string connected between the FPSO and the subsea infrastructure which can lead to damage to FPSO, the top side equipment, the subsea infrastructure or the casing string itself.

Movement of the FPSO can be accommodated by providing a telescopic joint in the casing string. Such a joint comprises two concentric tubular members or pipes, forming an outer element and an inner element of the joint. The inner element can slide longitudinally or stroke within the outer element and extends out of the end of the outer element. Typically the telescopic joint will be formed with an inner pipe section and an outer pipe section. The outer pipe section is typically connected to the upper most riser joint of the casing string and the inner pipe section is typically