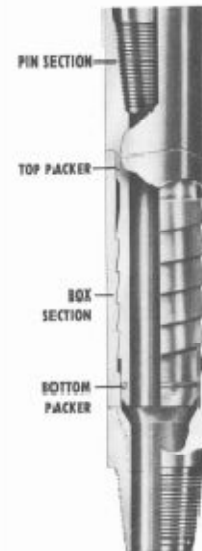


SAFETY JOINTS

SAFETY JOINTS ARE TWO-PIECE RELEASING DEVICES WHICH PROVIDE A POSITIVE MEANS OF PARTING THE DRILL PIPE, TUBING OR WASHOVER STRING IF THE NEED ARISES. THEY ARE SIMPLE AND EASY TO MAKE UP, RELEASE, AND RE-ENGAGE. THEY TRANSMIT FULL TORQUE IN EITHER DIRECTION AND WITHSTAND EVERY NORMAL OPERATION. NO MOVEMENT CAN TAKE PLACE BETWEEN THE TWO SECTIONS OF THE JOINT, NOR CAN IT BE BROKEN WITHOUT SPECIFIC MECHANICAL PROCEDURE.

THE CONSTRUCTION OF THE SAFETY JOINTS IS SIMPLE, MAKING THEM RUGGED AND RELIABLE. THEY CONSIST OF A PIN SECTION, A BOX SECTION, A TOP PACKER AND A BOTTOM PACKER.



THREE SPECIFIC TYPES ARE AVAILABLE

AS FOLLOWS:

DRILL PIPE SAFETY JOINTS WITH TOOL JOINT CONNECTIONS; O.D. AND I.D. CORRESPOND TO THOSE OF TOOL JOINTS.

TUBING SAFETY JOINTS WITH TUBING CONNECTIONS O.D. SAME AS O.D. OF COUPLING; I.D. SAME AS I.D. OF TUBING STRING.

WASHOVER SAFETY JOINTS, RUN BETWEEN DRILL PIPE AND WASHOVER STRING, HAVE TOOL JOINT BOX IN SAFETY JOINT PIN SECTION, AND WASHOVER STRING PIN ON SAFETY JOINT BOX SECTION. DIAMETERS CONFORM TO THOSE IN USE ON WASHOVER PIPE.