The GMC Intermediate Tendon Connector (ITC) is a field proven, concentric thread, pin and box connector design that combines high strength and excellent fatigue resistant properties with fast and reliable field make-up.

The weldable connector material permits high strength and high fatigue resistant tendon joints to be prefabricated in a shore-based workshop. Then, the joints are assembled safely and quickly offshore into the full tendon length.

Assembling tendons offshore with proven fatigue resistant connectors and 100% shop controlled welding, guarantees the maximum level of tendon reliability and reduces offshore construction time.

Based on modern analysis techniques, GMC’s ITC design is highly optimised to reduce stress concentrations and improve performance over older designs in the marketplace.

GMC’s Intermediate Tendon Connector (ITC) is guaranteed to beat the competition on performance, price, and delivery lead times.

Tendon Leg Platform (TLP) tendons are a demanding application for mechanical connections, requiring high strength, fatigue resistance, and sealing.

The majority of successful TLP projects to date have relied on a pin and box, hydraulically made up connector for offshore assembly of tendon joints. GMC’s ITC advances this proven connector design with a number of design enhancements.

GMC engineers can adjust the connector design to all tendon operational extremes and survival conditions for bending moment and Tension Load specifications. Connectors are commonly adjusted for all Tendon sizes ranging from 12” - 48” plus diameters.
ITC Box and Pin Connection

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The GMC Intermediate Tendon Connector
- consists of a proven concentric ring pin and box connector.
- is made up axially using a combination of axial force and hydraulic annulus pressure.

Customised Features

For each new TLP project, GMC engineers will work closely with the operator to design a project specific qualification program. Leveraging the extensive testing that has already been completed, provides the appropriate level of design validation and qualification.

For example, watertight bulkheads can be designed within the ITC for tendon compartmentalisation.

Moho Nord TLP Project

GMC supplied over 100 sets of its concentric thread, pin and box type connectors under contract for the Moho Nord TLP project.

The 16,500 ton TLP hull and topsides were vertically moored in over 780 meters water depth by the tendon tethering system. GMC’s high strength fatigue resistant mechanical connector provided the intermediary connectors on the tendons. The 24 inch OD connectors have rated operating capacity of 790 metric tons and a survival rating of 2000 metric tons.

The scope of supply included the connectors, the make and break tool, spider table hang-off tool, and a tendon handling tool. GMC technicians also provided tendon installation support. The connectors were constructed using A707 material complete with end cap protectors for transportation to the fabrication facility.

ITC Specification

GMC engineers can adjust the connector design to all tendon operational extremes and survival conditions for bending moment and Tension Load specifications.

Connectors are commonly adjusted for all Tendon sizes ranging from 12” to 48” and larger diameters.

Contact Us Today!
Let GMC Be Your Connected Solution!