

Fatigue Analysis for Coiled Tubing FACT

FACT is a management tool that can be used to maximise the safe use of coiled tubing strings. The **Fatigue Analysis**, tracks life consumption of individual coiled tubing strings and parts of the strings subject to jobs carried out in wells or in the yard, and showing life consumption per job.

In addition, the module gives the user the option of finding the maximum number of cycles to fatigue failure, with or without internal pressure and subject to a user specified geometry of the goose-neck and the reel.

In all the computations of this module, corrosion factors (due to acid, cement, etc.) and stress concentration factors (due to welds) are taken into account.

There are two modes of operation of the program, as a stand-alone program where data can be entered manually, or can be used in real-time reading data directly from a data-logging program such as DART producing up-to-date state of the pipe as well as the real-time tri-axial stresses.

At any time, the user can view the current status of the coiled tubing or can review the history of the string.

A database of the most common coiled tubing sizes and materials currently produced by the manufacturers is included. In addition, a database of most common corrosion factors and stress concentrations due to welds are also included. The user is also able to add new records to the supplied databases.

