

Abstract

PIPE REEL LOAD SIMULATOR

An arrangement of elements which are used to restrain and deflect a pipe specimen to a prescribed form with precisely controlled loads. A rigid frame includes a movable pipe bending form to which one end of a pipe specimen is connected and a rotating table to which the second end of the pipe specimen is connected. Means for assessing the drive torque used to draw the pipe specimen over the pipe bending form is provided in the form of a load cell. The rotating table is used in combination with a travelling pipe end truck foundation to generate a bending moment in the pipe specimen in the same plane as the pipe specimen is being bent by the pipe bending form. By the use of precise loads on the pipe specimen, computer analysis of the simulated reeling of the given pipe construction will produce predictions of the reeling tension, shear, and bending moment in the pipe at the point of the travelling pipe end as this point on the pipe approaches contact with the reel.

FIG. 1

