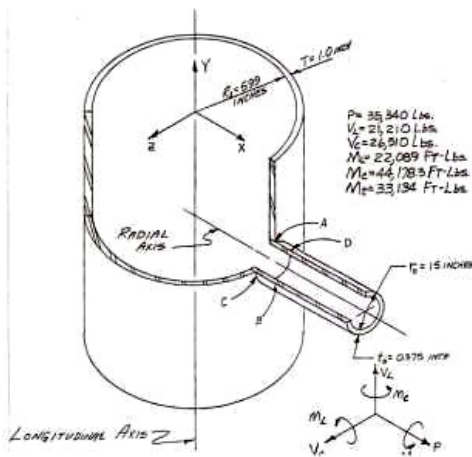


Analysis of Stresses in Pressure Vessels and Tank Shells at Nozzle and Clip Connections Resulting from External Loads

[WERCO 107/297™](#) is a comprehensive software package for calculating stresses in shells in accordance with the guidelines set forth in the Welding Research Council Bulletins 107 & 297. The program eliminates the need for hours of tedious hand calculations and manual cross referencing and dramatically reduces the possibility of errors.



GENERAL FEATURES

- Easy to use Data Entry Dialog screens
- Easy to understand HELP screens
- Extensive Data Checking
- Imperial and International units
- Support provided by experienced engineers

WERCO 107/297™ CAPABILITIES

- Calculates stresses at eight points on the shell at the nozzle, clip or lug intersection
- Automatically compares calculated maximum combined stress intensity with the allowable stress value – automatically increases reinforcing pad thickness until the calculated stress value is found to be less than the allowed stress
- Determines worst combination of positive and negative loads and then designs a reinforcing pad so that the calculated stress is less than the allowed stress.

WERCO 107/297™ APPLICATIONS

- Provides an effective tool for evaluating the ability of a nozzle to withstand the forces and moments applied by piping
- Provides an effective tool for evaluating the ability of a clip to withstand the force and moment loads applied by piping, structural members and equipment
- Provides an effective tool for evaluating the ability of a lifting lug to withstand the forces and moments applied to it at lift
- Provides technical compliance and documentation for regulatory authorities



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- Enables an engineer/designer to determine the reinforcement required in spherical and cylindrical shell at the intersection of a nozzle, a clip or a lifting lug.

WERCO 107/297™ Input



- Shell Geometry Shape (cylindrical or spherical)
- Attachment Geometry shape (round, square or rectangular – solid or hollow)
- Attachment Orientation to shell
- Loads (forces and moments) X, Y & Z
- Internal Pressure acting on shell
- Joint efficiency, if applicable
- Maximum Allowable Stress Intensity
- Maximum Reinforcing Pad Thickness

WERCO 107/297™ Output

- Input Echo with Error and Warning messages
- Stress Report in WRC 107 Spreadsheet Format
- Lists Bulletin Factors used in the calculations
- Required Reinforcing Pad Thickness
- Sizes Minimum Wall Thickness for nozzles
- Calculates Nozzle re-pads, if required.

