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Analytical solution for limit load of orthotropic pressure pipe with internal circumferential crack

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Highlights:

- The analytical solution for limit load of orthotropic pressure pipe with constant-depth internal circumferential crack under combined pressure, axial force and bending has been obtained.
- It is necessary to consider three directional stress for limit load of thick-walled pressure pipe with internal circumferential crack.
- The limit load of pipe under pure bending is only related to axial yield strength. The limit load of pipe under pure internal pressure is mainly determined by circumferential yield strength.

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