<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Maintenance Management</th>
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<tbody>
<tr>
<td>TSC</td>
<td>Gas Pipeline Leak Surveying</td>
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<tr>
<td>TSC Description</td>
<td>Plan leak survey programmes and perform leak surveys on natural gas pipelines</td>
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<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
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<th>Level 6</th>
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<td>Conduct leak surveys on low- and medium-pressure natural gas pipelines, by reporting leaks or damages for resolution, and recording daily leak survey results into gas mapping systems</td>
<td>Maintain the integrity of leak survey records and ensure that leak surveys are executed according to plans</td>
<td>Manage the master leak survey programme by preparing reports on leak survey results</td>
<td>Oversee leak surveys of the gas pipeline network in accordance with performance standards, and review leak survey trends for system enhancement</td>
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### Knowledge
- Pipeline leakage principles
- Pipeline leak survey methods and techniques
- Leak survey equipment operation procedures
- Leak marking methodologies
- Flame ionization detector tests
- Cosmo gas detector tests
- Types of gas mapping systems
- Topographical and geographical map interpretation methods
- Leak test boundaries
- Types of Materials and work orders for leak surveys
- Methods of leak survey planning
- Alternative leak survey methods
- Types of classifications and prioritisation of leaks
- Methods to identify pipeline leaks of critical importance
- Root cause analysis methods
- Pipeline performance standards
- Pipeline leak trends
- Best industry practices in pipeline leak surveys

### Abilities
- Perform leak surveys on low- and medium-pressure gas pipelines
- Record daily leak survey results into gas mapping systems
- Report any leaks or damages for resolution
- Operate leak survey and detection equipment
- Plan and supervise leak surveys
- Keep records of leak survey results and generate monthly reports for submission
- Issue materials and work orders leak surveys
- Prepare completion certificates for works to be carried out by contractors
- Determine leak survey work site boundaries
- Manage the master leak survey programme for gas systems
- Review and compile monthly reports on leak survey findings for management
- Plan overall master leak survey schedules
- Determine appropriate leak survey methods to use
- Oversee leak surveys for the entire gas pipeline network in accordance with performance standards
- Study data and trends of leakage prevention and recommend enhancements
- Refine the master leak survey programme and schedules
- Approve and/or defer leak survey plans for repairs of detected leaks