API Technical Report
16TR1, First Edition

BOP Shear Ram Performance Test Protocol
June 2018 Summer Conference Update
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API 16TR1 Scope

This document outlines the standardized test protocol, including data and reporting requirements, for performing sealing and non-sealing BOP shear ram performance tests. This protocol determines the parameters that can support field system performance and confidence in successful shearing and sealing.

This document is not intended to be used for qualifying BOP shear rams or as an FAT procedure. Qualification and FAT of BOP shear rams is per API 16A.
API 16TR1 Summary

• Details steps to be taken before shearing
  • Data to collect on the BOP equipment and test specimen
  • The shear and seal procedure shall entail three tests (two if certain criteria met), with emphasis on determining not only the shear pressure, but also the minimum pressure required to achieve a low and high-pressure seal after shearing.
• Details data to be taken after the shear – consistency
• Provides flow charts to follow for each test attempt
API 16TR1 Ballot Status

<table>
<thead>
<tr>
<th>Balloting Totals</th>
<th>Affirmative</th>
<th>Negative</th>
<th>Abstain</th>
<th>Did Not Vote</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

- Total Responses: 31
- Total Ballots: 35
- Response Rate (Affirmative + Negative + Abstain) / Total Ballots: 89% Must be > 50%
- Approval Rate (Affirmative / [Affirmative + Negative]): 89% Must be >= 66.66%
- Consensus: YES

- Comment Ballot received 138 comments
- Technical comments: 69
API 16TR1 Comment Resolution

- Ballot received 3 negative votes
  - Involved all three negative voters during the process and all three withdrew negative vote and changed to affirmative after comment resolution
- Revised the protocol according to comment resolution
- API sent 16TR1 to final press stage
- Anticipate publication 3Q18

- Plans to begin Phase II – Wireline, Coiled Tubing