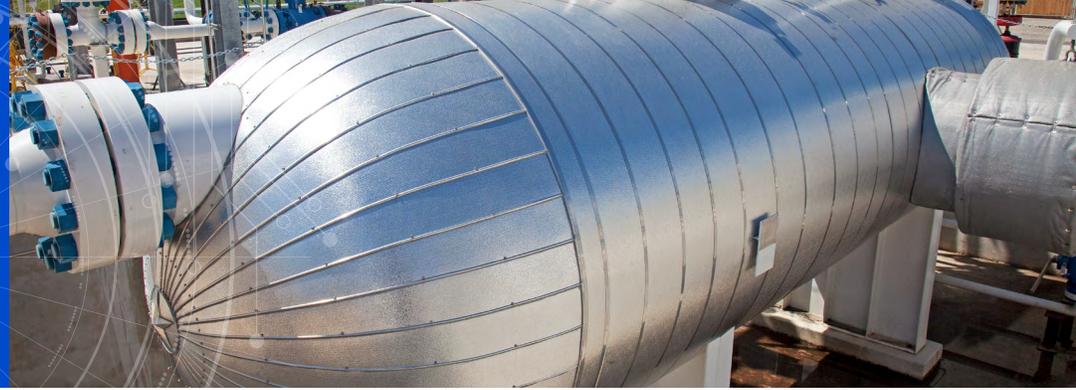




SOUTHWEST RESEARCH INSTITUTE



Separation Technology Research (STAR) Program

Vision Statement

Advance separation research that will result in accurate performance data to validate equipment and standardized test protocols.

Mission Statement

We benefit STAR Program Participants by providing accurate, applicable performance data for design, characterization, and qualification of separation equipment using a multi-company, collaborative model.



The STAR Program is a Joint Industry Project (JIP) initiated by the energy industry and Southwest Research Institute® (SwRI®) for research, systematic testing, and enabling the qualification of separation equipment. The program is led and administered by SwRI, a nonprofit organization dedicated to the advancement of science and technology. The program combines the knowledge, effort, and resources of members in the energy industry to collect relevant data on separation performance that would be too expensive for a single company to generate.

Program Goal

Systematically test separation equipment and gather high-quality data at close to field conditions that can be used to improve equipment selection and operation, while motivating equipment design improvements and the development of new technologies.

Member Benefits

- Leveraged research resulting in reduced time and cost from initial concept to field application
- Systematic/standardized testing to provide consistent evaluation of similar technologies, minimize repeated testing, and provide a level playing field
- Reduced risk associated with implementing technologies in the field with consistent qualification testing at independent test facilities
- Equipment performance data available for contractors to offer packaged solutions to customers, and for equipment manufacturers to market their products among members or improve their technologies
- Proprietary and non-proprietary equipment testing data sharing among members, protecting manufacturer know-how
- Minimization of capital costs through use of existing flow loops for research



Advanced science. Applied technology.

Program Duration

- The STAR Program renews in three-year increments (phases).
- Phase 1 began in June 2014 and extended through May 2017.
- Phase 2 began in January 2018 and extended through December 2022.
- Phase 3 began in July 2023 and will continue through May 2026.

Program Fees

- Operator - \$495,000 (\$165,000/year)
- Contractor - \$165,000 (\$55,000/year)
- Equipment Manufacturer - \$82,500 (\$27,500/year)

Late-joining participants are accepted.

Areas of Research:

- Gas/liquid, liquid/liquid, gas/liquid/liquid separation (with and without solids)
- Internals (mesh pads, vane/plate packs, inlet devices, cyclone banks, etc.)
- Stand-alone equipment (conventional separators, compact in-line devices, desanders)
- Separation systems (e.g., bulk gas/liquid separation combined with gas scrubbing)
- Instrumentation and monitoring equipment
- Research funds are primarily dedicated to experimental programs at field-like conditions including high pressures with hydrocarbon fluids
- Low-pressure testing is also conducted when appropriate (e.g., liquid/liquid separation studies) or in the early stages of technology evaluation



<https://swri-assets.s3.amazonaws.com/library/tours/Wet-Gas-Flow-Loop/index.htm>

International Participation

The STAR Program provides a forum for global experts in phase separation and equipment manufacturers to meet on a regular basis and discuss common needs, available technologies, and new developments. Members guide the direction of the program by selecting project ideas, identifying technologies to be tested, providing input on testing approaches, participating in planning experiments, witnessing testing, and commenting on results.

To join, please contact:

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SOUTHWEST RESEARCH INSTITUTE

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Designed & printed by SwRI MPS 18-1123 JCN 271131 tp