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### A MODERN STEANDERN STEANDERNUTION INDUSTRY'S FIRST GROOVED MECHANICAL SOLUTION FOR STEAM PIPING

Victaulic's System Solution for Saturated Steam is the industry's first grooved mechanical piping solution designed for use on commercial and industrial saturated steam and condensate piping.





Style 870 Rigid Coupling and OGS-200 Grooved End Fittings

#### Download publication 100.01 for the fittings Download publication 100.02 for the coupling

- Saturated steam: 200 psi | 1379 kPa | 14 bar
- Nonsteam: 740 psi | 5102 kPa | 51 bar
- -20°F to +388°F | -29°C to +198°C
- Designed in accordance with ASME B31.1, B31.3 and B31.9 codes

#### Series 159 Flexible Loop

#### Download publication 100.13 for more information

- Saturated steam/Nonsteam: 150 psi | 1034 kPa | 10 bar
- +32°F to +366°F | 0°C to +186°C
- Accommodates piping movement from thermal changes, seismic activity, and differential building settlement
- Compliant with ASME B31.1, B31.3 and B31.9 for means of increasing flexibility in the piping system



#### Victaulic® System Solution for Saturated Steam

Available in sizes  $2-8" \mid DN50-DN200$ , the Victaulic steam solution includes the Style 870 rigid coupling, the Series 871 gate valve, the Series 159 flexible loop, a full line of fittings, the RG1200 in-place roll grooving tool, and pipe preparation tool roll sets. For use on Schedules 40 and 80 carbon steel pipe, the system eliminates the need to weld steam and condensate piping up to 200 psi | 1379 kPa | 14 bar and +388°F | +198°C.

For the first time in the history of steam piping, engineers, contractors, and facilities managers

working in this industry have access to the benefits of Victaulic grooved pipe joining solutions, including reduced labor costs, compressed schedules, increased safety, and ease of maintenance.

Victaulic steam system components are designed in accordance with ASME B31.1, B31.3 and B31.9 codes to ensure technical confidence and reliability. The construction and performance of the gate valve meets API 600 and API 598 requirements. Canadian Registration Numbers (CRN) are available upon request.





#### Series 871 Gate Valve

#### Download publication 100.12 for more information

- Saturated steam/Nonsteam: 200 psi | 1379 kPa | 14 bar
- +32°F to +388°F | 0°C to +198°C
- Bi-directional shut off service
- Meets API 600 and API 598 requirements

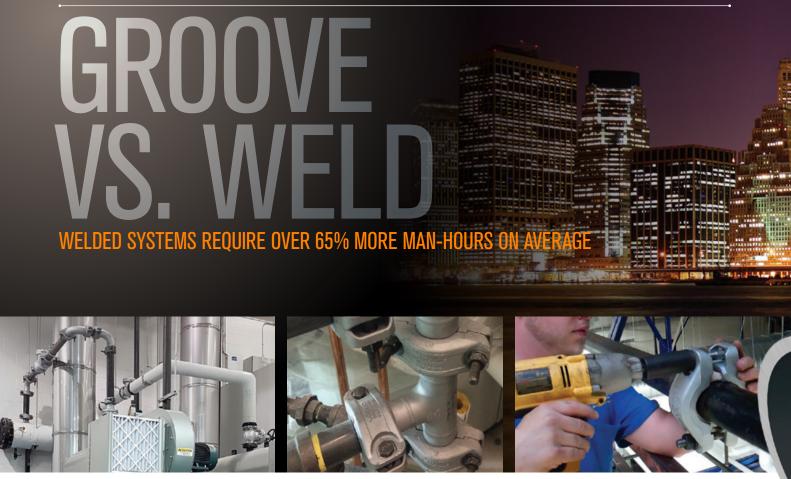


#### RG1200 In-Place Roll Grooving Tool

#### Download publication 24.11 for more information

- Roll grooves Victaulic proprietary OGS-200 groove profile, exclusive to this product line
- 2-6" DN50-DN150 Schedule 40 carbon steel pipe
- 2–3" | DN50–DN80 Schedule 80 carbon steel pipe
- Lightweight, easy-to-use design; Allows grooving in confined spaces

Victaulic® System Solution for Saturated Steam



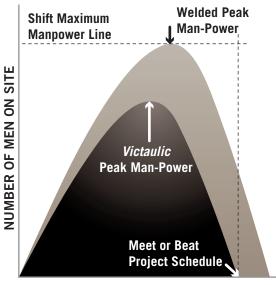
#### Whether it's new construction, a retrofit opportunity, or a repair job, the Victaulic steam solution is faster, more reliable, and more cost-effective than welding.

#### Reduce total installed costs and improve jobsite safety

- No certified welders needed
- No fire watch or hot work permits needed
- No x-ray of joints required
- No pre-heating of pipe in cold weather

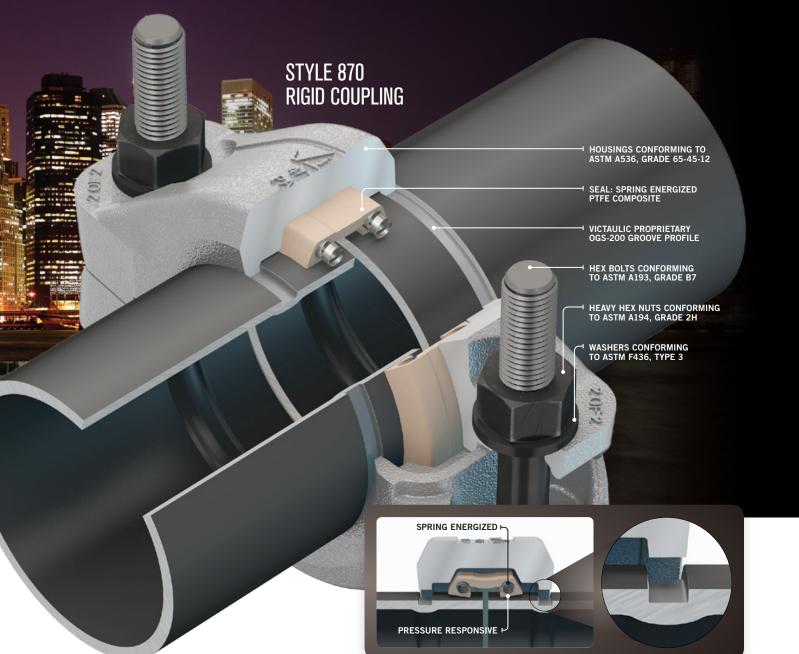
#### Compress construction schedules and reduce downtime

- Installs in minutes instead of hours or days
- Improves system maintainability with quick access to components
- Allows for future system expansion, easy transitions, and confined space installation



MECHANICAL CONSTRUCTION WEEKS





#### Patent-pending seal technology

The Style 870 rigid coupling contains a spring-energized polytetrafluoroethylene (PTFE) composite seal, which offers excellent temperature and chemical resistance.

- For steam applications: pressure ratings up to 200 psi | 1379 kPa | 14 bar
- For nonsteam applications: full vacuum up to 740 psi | 5102 kPa | 51 bar
- Operating temperature range: -20°F to +388°F | -29°C to +198°C
- Excellent chemical resistance

#### Proprietary groove profile

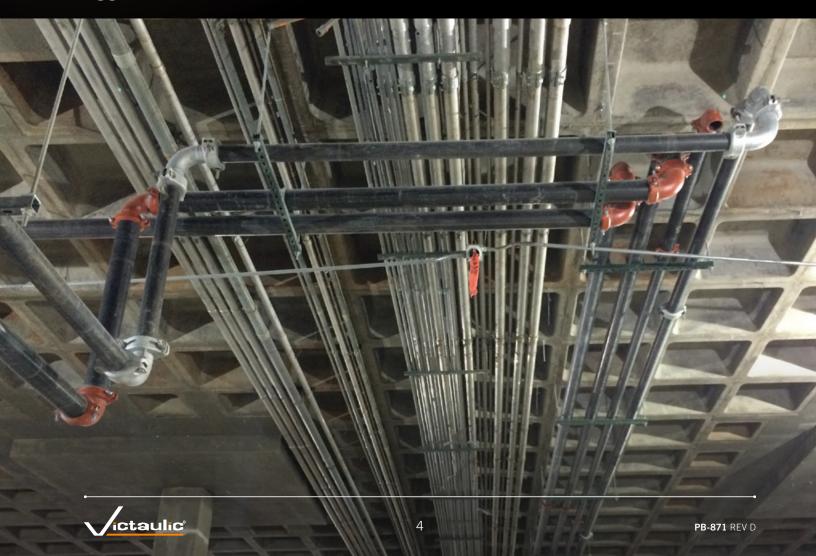
The Victaulic steam system features a new, proprietary groove profile, OGS-200. Designed as a safety feature, this new groove profile ensures products featuring a standard groove profile, also known as the Victaulic Original Groove System (OGS) profile, are not installed on high-temperature/

high-pressure applications. OGS-200 roll sets are available exclusively for the Victaulic RG1200, VE272, VE416 and VE460 roll grooving tools only.

VE272 model shown. **Download publication 24.01** for more information on the VE grooving tools.

## CASE STUDY MUSEUM OF WESTWARD EXPANSION

In 2015, the Museum of Westward Expansion, located below the Gateway Arch in St. Louis, underwent construction as part of the \$380 million CityArchRiver project to improve the national monument and the surrounding area. As part of the renovation, the museum's HVAC and saturated steam piping systems needed an overhaul, and the contractor, SystemAire, Inc., needed to install a piping solution that could provide a safe work environment for the underground project and contend with the project's aggressive construction schedule.



#### **PROJECT** Type of Facility: National Monument Victaulic Solutions: **Compressed Schedule** Installation Time Savings No Fire Hazard Space Constraints Owner: Government Contractor: SystemAire, Inc. **Engineer/Consultant:** KJWW **Completed Date:** December 2015

Victaulic's new System Solution for Saturated Steam, the industry's first grooved mechanical solution for commercial and industrial saturated steam and condensate piping, provided SystemAire with access to the many benefits of grooved pipe joining, including increased safety, ease of maintenance, compressed schedules, and reduced labor costs. Style 870 rigid couplings and No. 890 90° elbows were installed on the museum's piping system, making it the first national monument to use Victaulic's new steam solution.

The first Style 870 coupling was installed in five minutes; welding the same joint would have taken more than an hour, making the coupling the obvious choice for

SystemAire. The grooved products also did not require certified welders, fire watch or hot work permits. Additionally, the museum's piping system is suspended 15 feet in the air, making it extremely difficult for a welder to access with heavy equipment, as well as a safety concern for the contractor. However, Victaulic's System Solution for Saturated System allowed the installation to be completed quickly, keeping to the tight construction schedule and without the need for hot works on the underground project.

#### **SPECIFICATIONS**

| Services: | Pipe Materials: | Pipe Size Range:  |
|-----------|-----------------|-------------------|
| HVAC      | Carbon Steel    | 2-8"   DN50-DN200 |



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