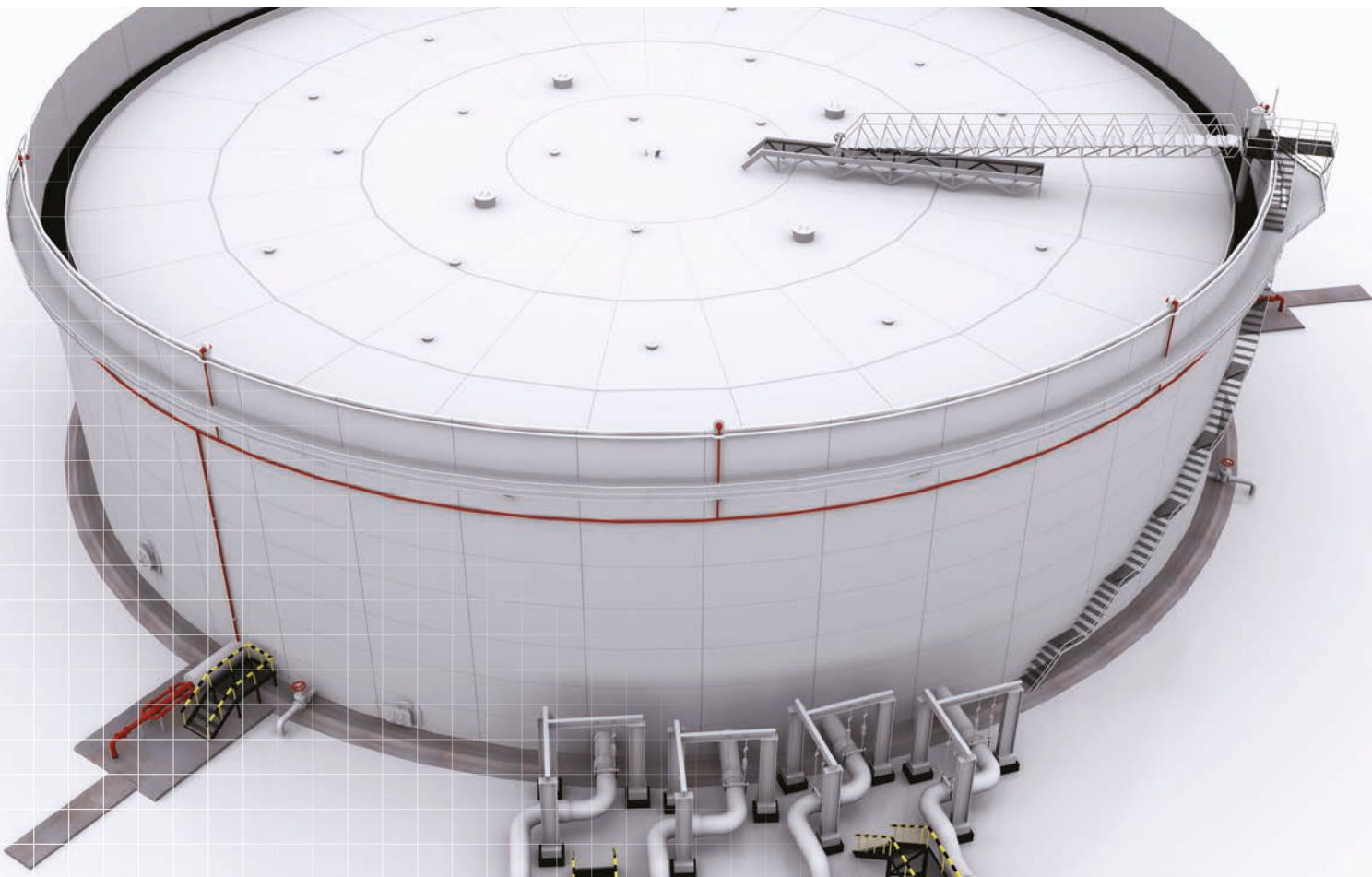


# EXTERNAL FLOATING ROOFS

## FOR CRUDE OIL STORAGE TANKS





## SHERWIN-WILLIAMS DELIVERS A 20 YEAR EXTERNAL FLOATING ROOF (EFR) COATING SYSTEM

**As today's oil and gas industry continues to evolve, technology and coatings advancements are changing the demands of owners and experts who are looking to lower costs through life cycle extension.**

From your trusted partner that was first to bring you 20 year tank linings, Sherwin-Williams now delivers a 20 year external floating roof (EFR) coating system. This system, used in potable water storage tanks for the last two decades, is designed to protect EFRs from external corrosion and steel loss caused by chemical attack in severe environmental and immersion operating conditions.

We provide a corrosion protection system featuring Dura-Plate® UHS and Fast Clad® ER epoxy coatings that provide flexibility, edge-retention, high-film build properties, rapid-cure, and extended asset protection in immersion service.

## PERFORMANCE TESTING

Sherwin-Williams protective coatings and linings are generally chosen for their chemical resistance properties. They must also have sufficient mechanical properties to withstand abrasion impact and flexing of the substrate for the chemical resistance properties to protect the substrates as designed.

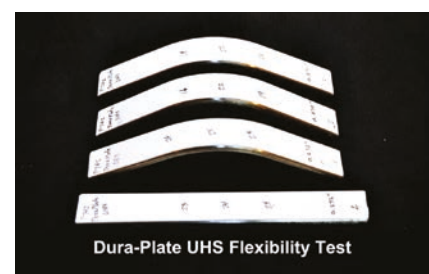
The bend test described in NACE RP0394-2002 FBE Coating Plant Applied and NACE TM0404-2004 Offshore Coating Tests is a valuable method of measuring the flexibility of industrial coatings. A critical flexibility number for coatings is one percent (1%) elongation – the strain at which common carbon steel reaches its yield point.

Sherwin-Williams has formulated the topcoat solutions in this EFR coating system to provide superior elongation and to provide flexibility. Both products have also been approved for 20 year service life by the U.S. Navy and are tested and approved in many global and nationally recognised specifications.

## FLEXIBILITY RESULTS

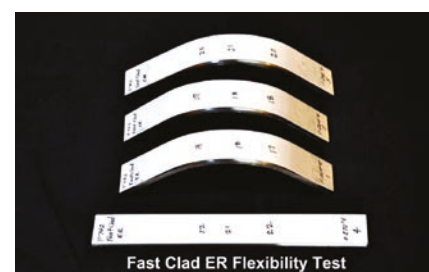
### DURA-PLATE® UHS

Strap	Average mils	Permanent strain (°/pd)	Permanent elongation (%)
1	24	5.69	4.95
2	19	5.92	5.15
3	20	5.67	4.93
Average	Average	5.76	5.01



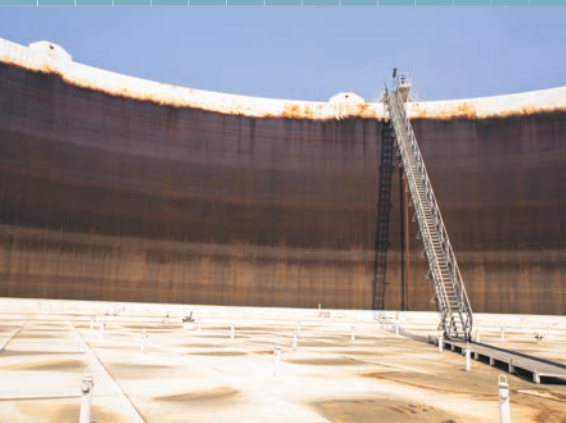
### FAST CLAD® ER

Strap	Average mils	Permanent strain (°/pd)	Permanent elongation (%)
1	18	6.39	5.56
2	18	6.39	5.56
3	20	6.44	5.60
Average	Average	6.41	5.57



Note: The Fast Clad® ER straps were bent to the approximate limit of the bend apparatus with no visible signs of failure.





## FIRST TO BRING YOU 20 YEAR TANK LININGS. SHERWIN-WILLIAMS NOW DELIVERS A 20 YEAR SERVICE LIFE EXTERNAL FLOATING ROOF (EFR) COATING SYSTEM YOU CAN COUNT ON.

As an industry leader, we understand your use of external floating roofs to protect your most valued assets, and as the leader in protective coatings for the oil and gas industry, we've got you covered.



### Don't just take our word for It...

"I am in need of a flexible, thick film EFR coating system that matches the 20 year service life of my tank linings."

**Cushing, OK, Tank Integrity Coordinator.**

"I am expecting a maximum service life out of this Sherwin-Williams EFR system. I helped pioneer this system working with Sherwin-Williams technical resources. Asset owners wanting an EFR system that matches the 20 year service life of their tank linings should expect the same."

**Dennis McCarty, Asset Integrity Project Manager.**

### THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams Protective & Marine delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe. Our broad portfolio of high-performance coatings and systems that excel at combating corrosion helps customers achieve smarter, time-tested asset protection. We serve a wide array of markets across our rapidly growing international distribution footprint, including oil and gas, water and wastewater, bridge and highway, steel fabrication, flooring, food and beverage, rail and power, marine and passive fire protection.

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## SHERWIN-WILLIAMS®

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05/21 EMEAIO041/V02/PC

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