



## Almost rocket science

### Alfa Laval welded heat exchangers at the Satish Dhawan Space Centre

On August 23, 2023, the Chandrayaan-3 lunar mission was the first to make a soft landing near the moon's south pole. 40 days earlier, at the Satish Dhawan Space Centre, the rocket's liquid propellant had been cooled inside an Alfa Laval welded spiral heat exchanger. By meeting the Centre's stringent demands on performance, safety, and sustainability, Alfa Laval is proud to be associated with the success of the Indian space program.

The Satish Dhawan Space Centre (SDSC) in Sriharikota is the spaceport of India, providing launch base infrastructure for the Indian Space Research Organisation (ISRO). At the Centre are facilities for solid propellant processing, static testing of solid motors, launch vehicle integration, and launch operations. For close to three decades, Alfa Laval has supplied the Centre with spiral heat exchangers for the cooling of liquid rocket propellants such as UH25, N<sub>2</sub>O<sub>4</sub>, MMH, MON3, and more recently, Isrosene.

#### Zero leakage

To become part of the Centre's storage systems for liquid rocket propellants, heat exchangers must meet several strict requirements. In addition to reliable performance in mission-critical processes, the equipment must provide protection for workers and the environment.

As a matter of safety and sustainability, ISRO does not accept any leakage of propellant, even at parts-per-million levels. During the initial tender process, stringent testing was conducted. It was found that the fully welded construction at the propellant chamber side of Alfa Laval spiral heat exchangers secured zero propellant leakage into the atmosphere.



### Decades of performance

In a recent statement, the SDSC SHAR notes: “Alfa Laval follows the test protocols as per the international standards to meet the required quality norms. [...] The oldest heat exchanger supplied is 28 years old and still working satisfactorily. [...] We look forward to having a continuous business relationship also in the future.”

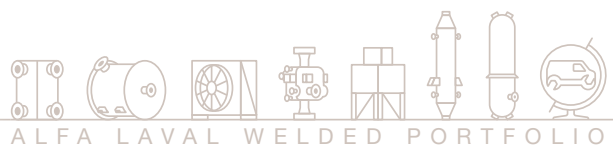
Mr. D. Rammohan, Product & Application Head at Alfa Laval India, responds: “We are proud to associate with the ISRO mission to provide the most reliable and efficient technology for their 1st and 2nd launch pads with indigenously manufactured spiral heat exchangers as per the stringent quality control requirements of SDSC SHAR.”



**Learn more about Alfa Laval Spirals**  
[alfalaval.com/spirals](http://alfalaval.com/spirals)

#### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)



100017194-1-EN 2311