vallourec® NewEnergies

CONNECTIONS MATERIALS SOLUTIONS

HYDROGEN APPLICATIONS

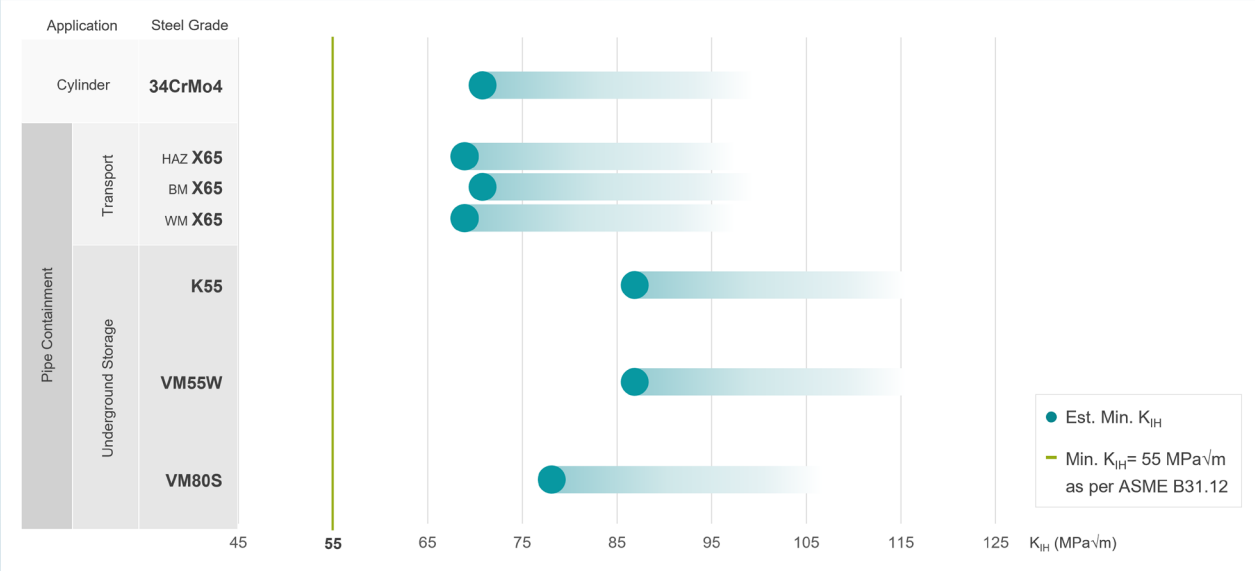
vallourec
SMART TUBULAR SOLUTIONS

OUR ANSWER IS A VERY COMPETITIVE RANGE OF TUBULAR SOLUTIONS FOR EVERY ENVIRONMENT

Using our extensive Oil & Gas expertise, we can offer the right tools to overcome high pressure and corrosion challenges for your hydrogen projects.

MATERIAL SELECTION FOR HYDROGEN

Operators storing or transporting hydrogen can benefit from Vallourec's expertise in pipe and tube metallurgy for hydrogen. Vallourec provides products resistant to the hydrogen environment including embrittlement and has active research and development on hydrogen compatibility of materials. This includes material testing according to ASME B31.12.

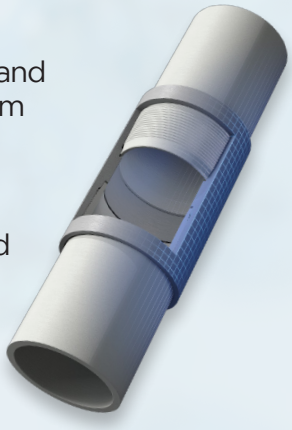


K_I applied in the range of 134-176 MPa√m was used during testing. The results of these evaluations demonstrated that all selected materials present a hydrogen stress intensity factor threshold K_{IH} greater than 67 to 87 MPa√m, largely above the 55 MPa√m minimum required by ASME B31.12.

VAM® CONNECTIONS QUALIFICATIONS

We have extensive expertise in the design and manufacture of premium gas-tight connections.

The VAM® 21 product line has been tested and qualified for hydrogen applications.



	7-5/8" VAM® 21	9-5/8" VAM® 21
Internal pressure operation	295 bar	275 bar
Internal pressure maximum	570 bar	560 bar
Pressure cycling	> 5500 cycles	> 5500 cycles
Tension maximum	270 T	440 T
Compression maximum	270 T	440 T
Temperature range	4°C – 70°C	10°C – 70°C
Gas mixture	5% H_2 / 95% N_2	5% H_2 / 95% N_2

NEED MORE INFORMATION?

Information is available online on solutions.vallourec.com or by scanning the following QR code.

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