De-Risking Vessel Procurement with RTP-1 Certification

RPS COMPOSITES

A Comparison of ASTM D3299/D4097, ASME RTP-1 design only, and ASME RTP-1 Certification

	ASTM D3299 and ASTM D4097[1]	ASME RTP-1 Design Only[1]	ASME RTP-1 Design, Fabricate, Inspect & Stamp
	Any manufacturer can claim to build to ASTM standards; No verification required.	Any manufacturer that claims to design to RTP-1 may, or may not, be able to meet ASME's standard.	Only ASME RTP-1 Accredited manufacturers can design[2], fabricate, inspect, and stamp per RTP-1.
Certifying Organization	None	None	ASME
Compliance Oversight	None	None	Thorough compliance with ASME code. Mandatory recertification every 3 years.
Audits	Self-performed. No third-party verification	Self-performed. No third-party verification	Annual inspections and audits by ASME
QC Requirements:			
Designed by Registered Professional Engineer	No	Maybe	MANDATORY
Rigid Document Control	Unknown	Unknown	MANDATORY
Use of Qualified Laminators	No	No	MANDATORY
Use of Qualified Secondary Bonders	No	No	MANDATORY
Use of Qualified Thermoplastic Welders	No	No	MANDATORY
Shop Qualification Laminates	No	No	MANDATORY (every 5 years)
Bond Strength Requirements	No	No	MANDATORY
Identification and traceability of all constituent parts	Unknown	Unknown	MANDATORY
Fabrication Details per ASME RTP-1	No	Maybe	MANDATORY
Inspections of resin and glass	No	Maybe	MANDATORY
Raw Materials Certificate of Analysis	No	Maybe	MANDATORY
Final Review by Certified Individual	No	No	MANDATORY
Quality Control Manual Approved by ASME	No	No	MANDATORY
Shop Accredited by ASME	No	No	MANDATORY
Shop periodically audited by ASME	No	No	MANDATORY
Shop Hydrotest	Maybe	Maybe	MANDATORY
Proof Test	No	No	As per ASME RTP-1 Standard
ASME Nameplate & Stamp	No	No	MANDATORY

[1]The requirements can also be specified by end user.

[2]Certified tanks/vessels can be designed by third parties who meet the necessary qualifications.