

COMPRESSED GAS CONTAINER SPECIALISTS

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ARROWHEAD

INDUSTRIAL SERVICES USA, INC.

DESIGN APPROVAL CERTIFICATE

FOR

COMPRESSED GAS CONTAINERS (SIMILAR)

Designer

Manufacturer

CP Industries CP Industries

2214 Walnut Street 2214 Walnut Street Mckeesport, PA 15132 Mckeesport, PA 15132 USA USA

Design Qualification No. QTR-177-1958

Design Specifics

Specification: NGV2-07 TYPE 4 Cylinder Part No: 0051-01-00-00 Cylinder Service Life: 20 years

Cylinder Drawing: 0051-01-00-00 a Rev. Aug-13 Liner Drawing: 0051-03-01-00 a Aug-13 Rev. Winding Summary: 0051-01-00-00_a Rev. Aug-13

Approved Contents: Compressed Natural Gas

Pressures (Serv./Test): 3600 psi / 5400 psi 248 bar / 372 bar

Comparison:

	Part No.	Length of	Service pressure	Outside Diameter,	Liner Wall Thickness, in.
		Cylinder (in)	(psi)	(nom.) in	(min.)
Original:	0038-01-00-00	80.0	3600	21.25	0.236
By Similarity:	0051-01-00-00	80.0	3600	16	0.197
	Percent	0.0	0.0	-24.7	-16.5

This certificate of design approval is hereby issued for Design Part Number 0051-01-00-00 with Design Qualification No. QTR-177-1958 dated August 27th , 2015 and the above stipulated criterion. The approval is by the similarity to the part No. 0038-01-00-00 - manufactured in accordance with design submisson No. 0038-00-01-00 dated November 2013. Please see the comparison table for the details.

Approved By:

ARROWHEAD INDUSTRIAL SERVICES

Joe Cassidy/Director of Quality Assurance

August 28, 2015

August 28, 2015

Date of Issue

STATE OF NORTH CAROLINA

SS

COUNTY OF ALAMANCE

appeared before me.

Witness my hand and Official Seal:

Date of Issue

Subscribed and sworn to (or affirmed) before me on this the 27th day of August, 2015 by Joe Cassidy personally known to me or proved to me on the basis of satisfactory evidence to be the person who