



U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Avenue SE
Washington DC 20590

JUL 18 2016

Mr. Lee Strobel
Senior Engineer/Technologist
GE Oil & Gas
50 Thomas Patten Drive
Randolph, MA 02368

Dear Mr. Strobel:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) dated October 15, 2015, you requested an interpretation of 49 CFR 192.63. You asked if the requirements of § 192.63 apply to your instrumentation components of a control valve assembly.

You stated that the actuator and instrumentation system are custom designed to operate with the pipeline control valve and the whole system is shipped and installed as a complete assembly. You asked whether the control valve system complies with the requirements of § 192.63 if this whole system is marked at the assembly level.

You referenced prior interpretations you believe state that it is acceptable for components to be bundle-marked, not individually marked, as long as they are grouped in a bundle, one which stays together up to the point of installation.

Based on these interpretations, you indicated your understanding was that as long as suitable markings are visible on the complete assembly, to the point of installation, it would not be necessary for markings to be maintained on the assembly or its individual subcomponents after the system has been installed. You further asked that should your understanding be incorrect, PHMSA clarify the definition of the term component in § 192.63, and whether this section requires each fitting, bolt and length of tube in instrumentation assembly to be marked individually. Also, you asked if the requirements apply to sub-components of assemblies such as valve body and seats or O-rings.

The purpose of § 192.63 is to require a pipeline operator, operating pipeline regulated by 49 CFR Part 192 to provide positive identification of the equipment or component of the pipe, and thus, assure that it is not subjected to operating conditions exceeding those for which it was designed. Each valve, fitting, pipe, or other component used in a pipeline to which § 192.63 applies must meet the marking requirements. Section 192.63 states:

§ 192.63 Marking of materials.

- (a) Except as provided in paragraph (d) of this section, each valve, fitting, length of pipe, and other component must be marked—(1) As prescribed in the specification or standard to which it was manufactured, except that thermoplastic pipe and fittings made of plastic materials other than polyethylene must be marked in accordance with ASTM D2513–87 (incorporated by reference, *see* § 192.7); (2) To indicate size, material, manufacturer, pressure rating, and temperature rating, and as appropriate, type, grade, and model.
- (b) Surfaces of pipe and components that are subject to stress from internal pressure may not be field die stamped.
- (c) If any item is marked by die stamping, the die must have blunt or rounded edges that will minimize stress concentrations.
- (d) Paragraph (a) of this section does not apply to items manufactured before November 12, 1970, that meet all of the following: (1) The item is identifiable as to type, manufacturer, and model. (2) Specifications or standards giving pressure, temperature, and other appropriate criteria for the use of items are readily available.

The GE Oil & Gas control valve system in question includes components such as an instrumentation system, valves, and actuators. The question is whether GE Oil & Gas can meet § 192.63 requirements by marking its whole control valve system with a single tag and not individually mark the components within this system. Section 192.63(a) clearly states that each component, including but not limited to, valves, fittings, and length of pipe must be marked as prescribed in the specification or standard to which it was manufactured, and to indicate size, material, manufacturer, pressure rating, and temperature rating, and as appropriate, type, grade, and model.¹ Based on § 192.63(a) requirements, GE Oil & Gas must comply with the standard to which it manufactures its control valve system and mark the components of this system, such as the instrumentation system and valves, including pressure containing components of valves and actuators, individually.

PHMSA notes the prior interpretations you referenced. In these interpretations, PHMSA has approved of bundle-marking. PHMSA continues to approve bundling marking as opposed to individually marking the components of the bundles – provided this bundle remains packaged together up to the point of installation. These interpretations are dissimilar and do not apply to your request, as you will not be bundling individual components. Instead you indicated that the instrumentation system, valves, and actuators are assembled into a working assembly, and then shipped as a complete assembly to its point of installation.

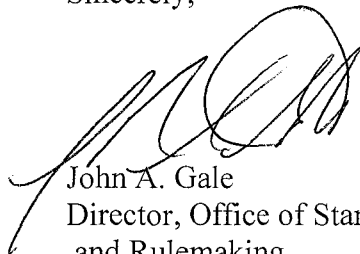
¹ Except that thermoplastic pipe and fittings made of plastic materials other than polyethylene must be marked in accordance with ASTM D2513–87

The Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety provides written clarifications of the Regulations (49 CFR Parts 190-199) in the form of interpretation letters. These letters reflect the agency's current application of the regulations to the specific facts presented by the person requesting the clarification. Interpretations do not create legally-enforceable rights or obligations and are provided to help the public understand how to comply with the regulations.

You asked PHMSA to clarify the definition of the term component in § 192.63. Component is not defined in Part 192, but it is used throughout the Part. Also, both Parts 193 and 195 define component. Therefore based on the use and the definitions in the other parts, a component can be interpreted as any part or system of parts of a pipeline as defined in § 192.3.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Gale", is written over the typed name and title.

John A. Gale
Director, Office of Standards
and Rulemaking



GE Oil & Gas

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15 October, 2015

Dear Sir/Madam,

I am writing to request a formal interpretation of your 49 CFR 192 regulation, relating to transportation of natural and other gas by pipeline, as it relates to the instrumentation components of a control valve assembly. Our fundamental question being: Are instrumentation components of control valve assemblies within scope of section 192.63 (Marking of Materials)? If so, are these components each required to be individually marked with the information referenced in that section?

In our business, we design and manufacture control valve assemblies that are used in natural gas transmission and distribution pipelines, covering a range of pipe sizes from 2" to 30"+ and pipeline pressures that can exceed 1000 psi. Our control valves are typically powered by a pneumatic actuator, which is controlled by an instrumentation system attached to the valve assembly. The pneumatic actuator is powered by the pipeline gas and the instrumentation system would typically include several components, such as smaller regulators and valves, which measure the pressure of the pipeline gas and regulate the flow of gas to the actuator (a description of a typical GE Becker control valve system is included in an addendum following this letter). The actuator and instrumentation system are custom-designed to operate with the pipeline control valve and the whole system is shipped and installed as a complete assembly. Therefore, our position has been that a marking at the assembly-level should be sufficient to cover the whole control valve system. We are asking for clarification of whether this meets the requirements of 49 CFR 192.

We would like to make reference to some interpretations that have previously been published by PHMSA, which may be relevant in this situation:

Several prior interpretations (e.g. PI#-71-0118 (1971) and PI#-74-018 (1974)) indicate that it is acceptable for lengths of pipe to be 'bundle-marked', as long as the bundle stays together up to the point of installation. Interpretation PI#-95-049 (1995) indicates that this 'bundle-marking' would also apply to valves and so, presumably, other components. So, if this logic is extended to our control valves, it would seem to follow that it would be acceptable for us to have one marking applied to the overall control valve assembly, rather than each individual subcomponent having to be marked individually, as long as the control valve system is shipped and installed as a complete assembly.

Interpretation #PI-74-021 (1974) also states that '*... The intent of the regulation is that the product, pipe, fitting, etc., be clearly identified from point of manufacture to installation.*' It also states that '*Section 192.63 does not require that markings be maintained after installation ...*'. So, this would seem to suggest that, as long as suitable markings are visible on the complete assembly, up to the



point of installation, then it would not be necessary for such markings to be maintained, either on the assembly or individual subcomponents, after the system has been installed.

We would be most grateful for any guidance you can provide as to whether our reasoning above is consistent with the intent of the 49 CFR 192 regulation. If you believe our reasoning to be incorrect, then could you please clarify the definition of the term 'component' in section 192.63 and the scope of the marking requirement? For example, would each fitting, bolt and length of tube in an instrumentation assembly (such as that depicted in Figure 1 in the addendum) need to be marked individually? What about sub-components of assemblies, such as the valve body, seats or o-rings?

Please do not hesitate to contact me if you would like to discuss further.

Yours sincerely,

Lee Strobel



ADDENDUM:

The intent of this addendum is to provide a more detailed description of the control valve assemblies that are manufactured by GE Oil & Gas, Becker Control Valves.

Figure 1 below shows a diagram of a typical GE Becker control valve system:

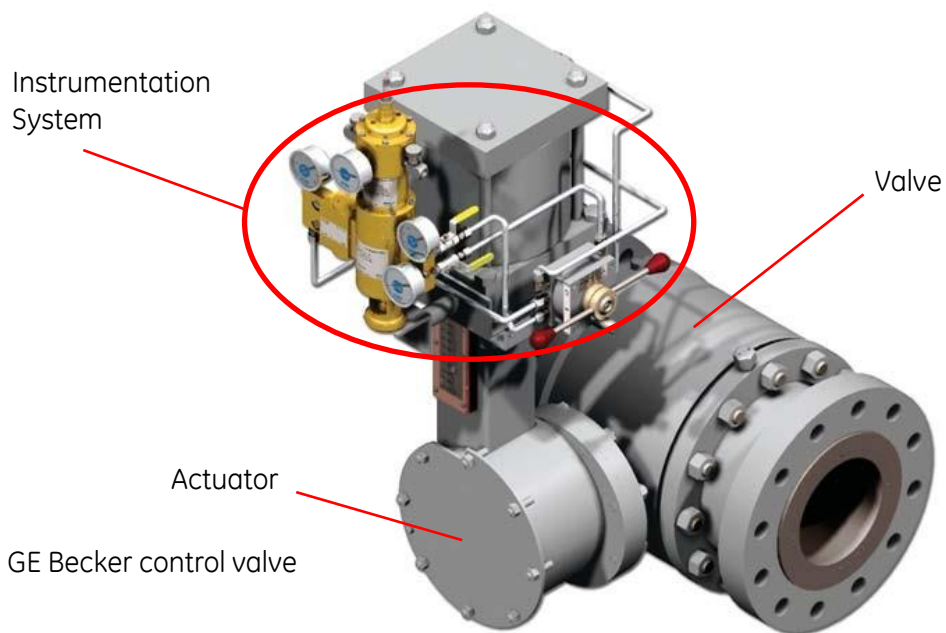


Figure 1 – GE Becker control valve system

The main valve connects directly into the gas pipeline and is controlled by the pneumatic actuator and instrumentation system. Figure 2 shows a typical GE Becker control valve installation:



Figure 2 – typical GE Becker installation.



Figures 3 and 4 below show the stainless steel tags that are typically attached to the control valve assembly, which include the information specified in section 192.63. As mentioned in the letter, the marking is currently being applied at the assembly level, given that the control valve, actuator and instrumentation system are shipped together as a complete functional assembly.

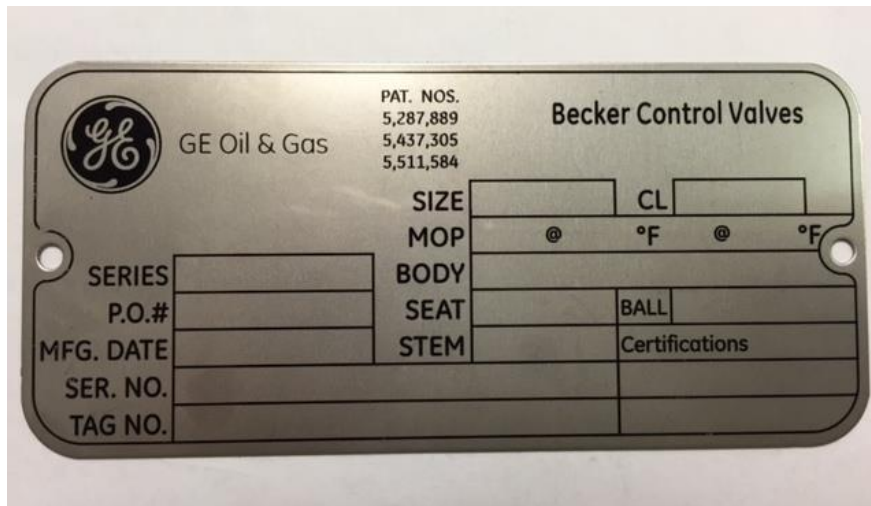


Figure 3 – GE Becker control valve tag

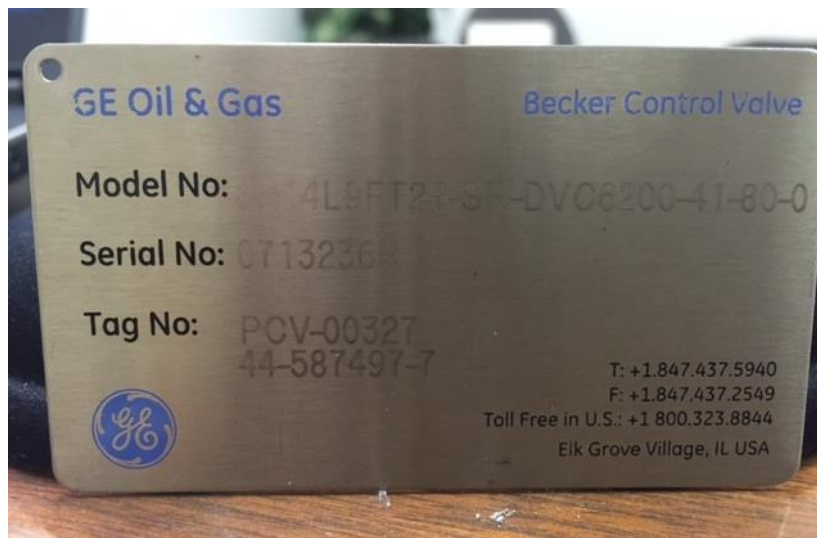


Figure 4 – GE Becker system ID tag.