

Pressure Piping Design Registration Audit Reviews
QMS & QCP Manual Holders Only

Information Paper IP-2016-07-01

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1. Scope

For Quality Control Program (QCP) or Quality Management System (QMS) companies only, TSASK has developed a provision where TSASK Design Surveyors shall have the option of doing an audit of the pressure piping design submission instead of a full review provided QCP/QMS companies have registered their Piping Material Specifications with TSASK. This paper details how to apply for that option and the difference in the two reviews (audit vs full review).

Please return to [Policy Paper TSASK-2016-07-01 Application for the Registration of a Pressure Piping Design](#) for detailed information on other submission requirements once you have finished reading this paper.

2. How to Apply for Piping Material Specification Review

The option to do an audit on a pressure piping design submission requires QCP/QMS companies to add a provision in their manuals for the registration of their piping material specifications. Companies shall submit their piping material specifications electronically along with the changed pages from their respective QCP/QMS manuals with a covering email requesting that their pressure piping material specifications be registered with TSASK. An email may be sent to CodesandStandards@tsask.ca requesting a manual revision and the registration of the specifications. A flash drive may be used to send the specifications to TSASK if there are too many to send as part of the email. Make sure to refer to the flash drive following by mail in the email.

3. Adding Provision for Piping Material Specification Registration to Current QCP and QMS Manuals

3.1. *Piping Material Specifications Reviewed at Time of QCP/QMS Renewal*

Manual holders shall submit their piping material specifications with their manual when their manual is up for review. The amount of time to review the piping material specifications shall be added to the audit/review invoice minus 3 hours of complimentary review time for the first time piping material specifications submission.

3.2. *Piping Material Specifications Reviewed Separately from QCP/QMS Manual Audit*

Manual holders shall submit their piping material specifications together with the new section of their manual that includes the revision for registering piping material specifications to TSASK. The amount of time to review the piping material specifications and the updated QCP/QMS manual minus 3 hours of complimentary review time for the first time piping material specifications submission shall be invoiced to the manual holder. Any time incurred beyond the 3 hour complimentary maximum shall be charged out at the current hourly design survey rate.

4. General Information for Registration

The QCP/QMS Company shall receive one registration number from TSASK for all of the specifications regardless of how many are registered. A list of registered piping material specifications with their registration number shall be returned to the submitter with a stamp on each specification to indicate acceptance by TSASK. The most current version of each of the piping material specifications (electronic) shall also be kept on file at TSASK for future reference.

The piping material specifications reference number shall be included on Part II of [TSK-1011 Application for the Registration of a Pressure Piping Design](#) whenever pressure piping submissions are made.

5. Use of QMS Company Piping Material Specifications by 3rd Party Designers - QMS Companies ONLY

When a QMS company uses a 3rd party design company, the QMS company has the option to allow the 3rd party designer to use their registered piping material specifications in the design. This can be accomplished in two ways:

- Design company uses the QMS piping material specifications in place of the design company's specifications; *OR*
- Design company reviews the QMS piping material specifications against their own specifications and states that the piping material specifications to be used in the design are equivalent.

TSASK shall accept either option. In both cases, the letter to TSASK acknowledging a 3rd party designer must be signed by the owner and the design company and be included as part of the pressure piping design review package. (Part II of [TSK-1011 Application for the Registration of a Pressure Piping Design](#))

6. Piping Material Specification Requirements

The piping material specifications shall include (as a minimum):

- Code of Construction – B31.1, B31.3, and B31.5 – may be more than one. Just be clear what applies to what systems/specifications.
- Category of fluid service if B31.3
- ANSI/ASME Pipe Material Specification and Grade
- Nominal Pipe Size and Schedule
- Pressure – Temperature Range applicable
- Applicable fluids
- Corrosion Allowance
- Flange Material and Rating
- Type of pressure test, testing mediums and test pressures
- PWHT details
- Radiographic examination requirements
- Other non-destructive testing (NDT)
- Minimum Design Metal Temperature (MDMT) testing if applicable
- Any other relevant information

7. Changes or Additions to Registered Piping Material Specifications

Any changes to registered piping material specifications shall require TSASK concurrence and an updated stamp and signature on the specification and an acknowledgement email from TSASK when the review is complete. An invoice for the time to review shall be sent to the company for payment.

If changes are made to specifications during the current validation period of the QMS/QCP, the fee for such a review would be the amount of time required by Codes & Standards Compliance to review and register (hourly rate).

The review of new specifications or specification updates that are included at the time of the QMS/QCP manual audit/review shall be included as part of the fee for the QMS/QCP review.

No pressure piping design shall use a piping material specification that is not registered with TSASK. If TSASK finds a non-registered piping material specification has been used, the pressure piping audit shall be cancelled and a full review of the submission shall be undertaken.

8. Piping Design Audit versus Piping Design Review

As long as the piping material specifications are used for the design of the pressure piping systems, TSASK shall do a high level cursory audit of the system. If TSASK finds any error, an additional two items shall be checked. If more errors are found, then the entire piping submission shall be reviewed. TSASK may consider suspending the QMS/QCP

manual holder's opportunity to take advantage of pressure piping audit reviews if these errors are systemic in nature. This may also affect the status of the QCP or QMS holder's manual.

The following forms shall be included with all submissions and shall be reviewed by Codes & Standards Compliance for completeness:

- TSASK Form [TSK-1011 Application for the Registration of a Pressure Piping Design](#); and
- TSASK Form [TSK-1003 General Engineering Requirements for Design & Construction of Pressure Piping Systems](#) (shall be signed, dated and stamped by a Professional Engineer)

Provided the forms are correct, the following items become auditable areas for TSASK:

- Random checks on submitted piping systems to ensure the piping material specification sheet as registered has been applied correctly. Line lists containing all the information on the piping system shall still be submitted to TSASK and signed and stamped by a Professional Engineer as part of the review application.
- Verify that the set pressure of the PRDs protects vessels and piping from exceeding their rated MAWP. If no vessel information is available at the time of the review, a comment shall be placed on the TSASK piping registration letter that states that the PRD's set pressures could not be checked against the MAWP of the vessel(s). This shall require follow up by the owner. *This will not hold up the registration of the piping system.*
- Confirm that new vessels have Canadian Registration Numbers (CRN) for Saskatchewan. If this information is not available at the time of the review, a comment shall be placed on the TSASK registration letter that states that the CRN(s) for the vessel(s) were not provided which shall require follow up by the owner. Again, *this will not hold up the registration*; but, without the vessel CRNs and data reports, the system(s) shall not be put into service.
- Verify test pressure and proposed NDT examinations are correct and in accordance with the applicable design code and that the test pressure does not exceed yield stress as per applicable code, if required.
- Special provisions for testing closure welds (if the provisions of B31.3 are applied) as per B31.3 Clause 345.2.3(c) Closure Welds.

9. TSASK Mandatory Compliance Review

9.1. Pressure Relief Devices (PRD)

TSASK shall review the:

- Placement of PRD(s);
- PRD discharge lines (especially if there is a common discharge header); and
- PRD discharge header piping calculation (if there is a common discharge header).

9.2. Pressure Relief Path Stop Valves

TSASK shall verify that there is/are:

- No stop valves between pressure components and their PRD(s);
- No stop valves between isolatable sections of piping and the associated PRD; and
- A PRP Stop Valve Control program in place if stop valves are found in the relief path; and
- An updated list of site(s) (*TSK-0015 Update to a Registered PRP SVC Program*) for inclusion with the registered PRP SVC Program for that company; OR
- A copy of *TSK-1012 Application for the Registration of a Pressure Relief Path Stop Valve Control Program*; OR
- Proof that the PRP Stop Valve Control Program is/will be part of the owner's QMS manual (either an order number if done online, a copy of the TSK-1012 with QMS Addition, or the name of the person on the credit card used to pay for the electronic submission).

10. Non-QMS or Non-QCP Manual Holders

Registering piping material specifications for non-manual holders is not being considered at this time. QMS and QCP manual holders are subject to audits which provide opportunities for follow up to ensure the specifications are being maintained and followed. This is not the case for non-manual holders.

11. Additional Information & Questions

11.1. Information/Questions regarding the Completion of the Data Reports

For questions regarding the completion of the data reports, please direct those inquiries to TSASK Codes & Standards Compliance. Please contact Codes & Standards Compliance:

- By email at CodesandStandards@tsask.ca;
- By phone at either (306) 787-4567 (Regina) or Toll Free (866) 530-8599. Please ask to speak to either a TSASK Design Reviewer or the Manager, Codes & Standards Compliance; or
- Visit the TSASK website at www.tsask.ca for more information.

Be sure to include the design submission reference number or pressure piping registration number if available when corresponding by email or when calling TSASK.

11.2. QMS/QCP Inquiries including arranging for TSASK Inspectors

For additional information on QMS/QCPs or if the services of a TSASK Inspector may be required, please contact TSASK:

- By email at info@tsask.ca;
- By phone at either (306) 798-7111 (Regina) or Toll Free (866) 530-8599. Please ask to speak to a TSASK inspector or the Manager, Boiler and Pressure Vessel Safety; or
- Visit the TSASK website at www.tsask.ca for more information