

**Board of High Pressure Piping Systems**  
**c/o Department of Labor and Industry**  
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December 10, 2008

LEGISLATIVE REFERENCE LIBRARY  
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Re: In the Matter of the Proposed Rules of the Minnesota Board of High Pressure Piping Systems Relating to High Pressure Piping, *Minnesota Rules*, Chapter 5230; Proposed Repeal of *Minnesota Rules*, parts 5230.0115, 5230.0130 to 5230.0170, 5230.0200, 5230.0210, 5230.0270 to 5230.1270, 5230.5010 to 5230.5825, and 5230.5925 to 5230.6200.

Dear Librarian:

The Minnesota Board of High Pressure Piping intends to adopt rules governing High Pressure Piping, *Minnesota Rules*, Chapter 5230; Proposed Repeal of *Minnesota Rules*, parts 5230.0115, 5230.0130 to 5230.0170, 5230.0200, 5230.0210, 5230.0270 to 5230.1270, 5230.5010 to 5230.5825, and 5230.5925 to 5230.6200. We plan to publish in the State Register a Dual Notice: Notice of Intent to Adopt Rules Without a Public Hearing Unless 25 or More Persons Request a Hearing, and Notice of Hearing If 25 or More Requests For Hearing Are Received.

The Board has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Board is sending the Library a copy of the Statement of Need and Reasonableness at the same time we are mailing our Notice of Intent to Adopt Rules.

If you have questions, please contact me at 651-284-5860.

Very truly yours,



Annette M. Trnka  
Board, Council and Rulemaking Assistant  
Department of Labor and Industry

Enclosure: Statement of Need and Reasonableness

## **Minnesota Board of High Pressure Piping Systems**

### **STATEMENT OF NEED AND REASONABLENESS**

#### **Proposed Amendment to Rules Governing High Pressure Piping, Minnesota Rules, Chapter 5230.**

#### **INTRODUCTION**

The Board of High Pressure Piping Systems ("Board") proposes to adopt amendments to Minnesota Rules, Chapter 5230, relating to high pressure piping systems. Minnesota Statutes, sections 326B.90 to 326B.925 (2008), are known as the Minnesota High Pressure Piping Act. Minnesota Statutes, section 326B.925, subdivision 2(a)(3), states the Board "shall have the power to adopt the High Pressure Piping Code that must be followed in this state." Minnesota Statutes, section 326B.925, subdivision 2(a)(5), states that the Board shall have the power to "adopt rules that regulate the licensure or registration of high pressure piping contractors, journeymen, and other persons engaged in the design, installation, and alteration of high pressure piping systems."

These proposed rules include both technical provisions and modifications to the licensing provisions. The Minnesota High Pressure Piping and Code for Power Piping Systems has not been technically updated since 1993. The current rules are therefore outdated. In order to bring the rules up-to-date in the most efficient manner, the Board has relied on the following national model codes in formulating the proposed rules:

- American Society of Mechanical Engineers' (ASME) 2005 edition of the Bioprocessing Equipment Standard (ASME BPE)
- ASME's 2007 edition of the Boiler and Pressure Vessel Code, section I (ASME Code for Power Boilers)
- ASME's 2007 edition of the standard for power piping (ASME B31.1)
- ASME's 2006 edition of the standard for ammonia refrigeration piping (ASME B31.5)
- American National Standards Institute (ANSI) and the International Institute of Ammonia Refrigeration's (IAR) 2008 revision of the standard for Equipment, Design, and Installation of Closed-Circuit Ammonia Mechanical Refrigeration Systems (ANSI/IAR 2)
- ASME's 2007 edition of the Boiler and Pressure Vessel Code, section IX (ASME section IX).

Where possible, the proposed rules adopt the model codes. The proposed rules include certain modifications to the model codes where appropriate, consistent with Minnesota conditions and practice.

In developing the proposed rules, the Board created the following committees of Board members: Ammonia Committee, Bioprocess Committee, Licensing Committee, Steam Committee, and Welding Committee. These committees held public meetings, created and reviewed drafts of possible rule amendments, and referred drafts to the full Board for review.

A Request for Comments was published in the *State Register* on Monday, May 12, 2008 (32 SR 2025).

## ALTERNATIVE FORMAT

Upon request, this Statement of Need and Reasonableness can be made available in an alternative format, such as large print, Braille, or cassette tape. To make a request, contact Annette Trnka, at the Department of Labor and Industry, Construction Codes and Licensing Division, 443 Lafayette Road North, Saint Paul, MN 55155-4342, telephone 651-284-5860 and fax 651-284-5743. TTY users may call 651-297-4198.

## STATUTORY AUTHORITY

All of the proposed rules amend the high pressure piping code or amend rules regulating licensure or registration. The Board's statutory authority to adopt these amendments is set forth in Minnesota Statutes, section 326B.925, subdivision 2(a)(3) and (5):

Subd. 2. **Powers; duties; administrative support.** (a) The board shall have the power to:

...

(3) adopt the high pressure piping code that must be followed in this state and any high pressure piping code amendments thereto. The board shall adopt the high pressure piping code and any amendments thereto pursuant to chapter 14, and as provided in subdivision 6, paragraphs (b), (c), and (d);

...

(5) except for rules regulating continuing education, adopt rules that regulate the licensure or registration of high pressure piping contractors, journeymen, and other persons engaged in the design, installation, and alteration of high pressure piping systems, except for those individuals licensed under section 326.02, subdivisions 2 and 3. The board shall adopt these rules pursuant to chapter 14 and as provided in subdivision 6, paragraphs (e) and (f);

....

The quoted portion of this statute refers to subdivision 6, which states that amendments of the high pressure piping code require an affirmative two-thirds or more majority vote of all voting members of the Board, and that all other amendments require an affirmative majority vote of all voting members of the Board. *See* Minnesota Statutes, section 326B.925, subdivision 6(b), (c), and (e). Each of the proposed amendments received the requisite vote by members of the Board.

This rulemaking is an amendment of rules adopted by the Department of Labor and Industry ("Department"), and so Minnesota Statutes, section 14.125, does not apply. The rulemaking authority in Minnesota Statutes, section 326B.925, is not new rulemaking authority, but is instead a transfer of certain rulemaking authority from the Department to the Board.

The Department's prior authority to make and amend rules regarding the technical requirements for high pressure piping stated: "The Department of Labor and Industry shall supervise all high pressure piping used on all projects in this state, *and may prescribe minimum standards which shall be uniform.*" Minnesota Statutes, section 326.46 (2006) (emphasis added). The italicized language was deleted when Minnesota Statutes, section 326.505 (renumbered as 326B.925), was enacted. See 2007 Minn. Laws, chapter 140, article 10, section 1 (amending 326.46) and article 10, section 10 (adding 326.505).

Similarly, the Department's prior authority to make and amend rules regarding examination and licensing of pipefitters stated:

*The Department of Labor and Industry shall prescribe rules, not inconsistent herewith, for the examination and individual competency licensing of contracting pipefitters and journeyman pipefitters and for issuance of permits by the department and municipalities for the installation of high pressure piping.*

Minnesota Statutes, section 326.48, subd. 1 (2006) (emphasis added). The italicized reference to the "Department" was changed to the Board when Minnesota Statutes, section 326.505 (renumbered as 326B.925), was enacted. See 2007 Minn. Laws, chapter 140, article 10, section 8 (amending 326.48) and article 10, section 10 (adding 326.505).

In any event, the Dual Notice in connection with the proposed rule will be published before December 31, 2008. Section 326.505 (now 326B.925) became effective July 1, 2007. See 2007 Minn. Laws, chapter 140, article 10, section 10. Accordingly, the Dual Notice will be published less than 18 months after the effective date of Minnesota Statutes, section 326B.925.

Under Minnesota Statutes, section 326B.925, the Board has the necessary statutory authority to adopt the proposed rules.

## REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out seven factors for a regulatory analysis that must be included in the SONAR. Paragraphs (1) through (7) below quote these factors and then give the agency's response.

**"(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes who will benefit from the proposed rule"**

Those who will be affected by the proposed rule, who will bear the costs of the proposed rule, and who will benefit from the proposed rule include: Owners of high pressure piping (HPP) systems; HPP contractors; and code enforcement authorities.

**"(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues"**

Because the Board of High Pressure Piping Systems only adopts the codes governing the construction and installation of HPP systems and does not administer them, the Board will not incur any costs associated with the adoption of these codes.

Costs to the Department of Labor and Industry include the costs of purchasing code books for state employees who inspect HPP systems and/or deal with HPP code questions as well as the cost of revising license examinations to reflect the updated code. Adoption of updated national standards will not affect state revenues.

**“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”**

Adopting a model code by reference is the least costly method for adopting a national model code, in accordance with statutory requirements. The Minnesota High Pressure Piping and Code for Power Piping Systems has not been technically updated since 1993.

**“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were rejected in favor of the proposed rule”**

No other methods were considered for achieving the purpose of the proposed rule. The American Society of Mechanical Engineers (ASME) and the International Institute of Ammonia Refrigeration (IIAR) are the only organizations who publish codes relating to design and construction of HPP that are generally accepted and in use throughout the United States, in accordance with statutory requirements.

**“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”**

Contractors, HPP system designers, and government inspection departments will need to purchase copies of ASME B31.1 (2007 edition), ANSI/IIAR 2 (2008 edition), ASME B31.5 (2006 edition), ASME BPE (2005 edition), ASME section IX (2007 edition), and ASME Code for Power Boilers (section I) (2007 edition). These individuals will also need to either purchase or print from the Web the updated Minnesota High Pressure Piping and Code for Power Piping Systems. Training curricula will need to be updated to incorporate any new/changed provisions in the code.

The cost to purchase each of the code books is: ASME B31.1 (\$315), ANSI/IIAR 2 (\$80), ASME B31.5 (\$140), ASME BPE (\$205), ASME section IX (\$450), and ASME Boiler and Pressure Vessel Code (section I) (\$395).

**“(6) the probable costs or consequences of not adopting the proposed rule, including those costs borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”**

If the updated ASME and ANSI/IIAR codes are not adopted, the State of Minnesota would have to fall back on the current rules. This would cause the HPP industry to continue to use a code that does not incorporate all of the latest technologies and safety practices in the HPP field.

**“(7) an assessment of any differences between the proposed rule and existing federal regulations and specific analysis of the need for and reasonableness of each difference”**

There are no applicable federal regulations that address HPP code issues in the construction of non-federally owned HPP systems.

### **PERFORMANCE-BASED RULES**

The proposed rules, other than the licensing rules, are based largely on national model codes. These model codes are generally performance-based.

The proposed amendments to the licensing rules will help ensure that individuals performing high pressure piping work have the necessary knowledge and expertise to perform high pressure piping work that is in compliance with all relevant codes. The proposed licensing rule amendments therefore implement performance-based standards to the extent practicable.

### **ADDITIONAL NOTICE**

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in a December 4, 2008, letter by Administrative Law Judge Kathleen D. Sheehy.

Our notice plan includes giving notice(s) required by statute. The Board will mail the rules and Dual Notice to everyone who has registered to be on the Department of Labor and Industry’s rulemaking mailing list for high pressure piping rules under Minnesota Statutes, section 14.14, subdivision 1a.

In addition to the rulemaking mailing list, the Board will be mailing or e-mailing the Dual Notice and proposed rule to trade associations involved in high pressure piping work. Those associations are as follows:

- a. Associated Builders and Contractors
- b. Local chapter of the Association of Minnesota Building Officials (AMBO)
- c. National Association of Elevator Safety Authorities (NAESA)
- d. Minnesota Mechanical Contractors Association
- e. Association of General Contractors of Minnesota
- f. Minnesota Utility Contractors Association
- g. Minnesota Municipal Utilities Association
- h. Builders Association of Minnesota (BAM)
- i. Builders Association of the Twin Cities
- j. Minnesota State Fire Chiefs Association
- k. Minnesota Plumbing, Heating and Cooling Contractors Association

- l. American Society of Plumbing Engineers – Minnesota Chapter
- m. American Society of Mechanical Engineers– Minnesota Section
- n. Association of Minnesota Counties
- o. Building Owners and Managers (BOMA)/St. Paul
- p. League of Minnesota Cities
- q. American Council of Engineering Companies of Minnesota
- r. Minnesota Pipe Trades Association
- s. Minnesota State Fire Marshal Division
- t. Minnesota Association of Townships
- u. Metropolitan Council
- v. Rochester Plumbers and Pipefitters Local Union 6
- w. Duluth Plumbers and Pipefitters Local Union 11
- x. Minneapolis Plumbers Local 15
- y. St Paul Plumbers Local 34
- z. Minneapolis Gasfitters Local 340
- aa. St Paul Pipefitters Local 455
- bb. Minneapolis Pipefitters Local 539
- cc. Virginia Plumbers and Pipefitters Local 589
- dd. Minnesota Association of Plumbing & Mechanical Officials
- ee. City of St Paul Mechanical Inspection Department
- ff. City of Minneapolis Mechanical Inspection Department

The Board will publish the proposed rules, the Statement of Need and Reasonableness, and Dual Notice on the Board's webpage on the Department of Labor and Industry's website. The Board will also give notice to the Legislature in accordance with Minnesota Statutes, section 14.116.

### **CONSULT WITH FINANCE ON LOCAL GOVERNMENT IMPACT**

As required by Minnesota Statutes, section 14.131, the Board has consulted with the Commissioner of Finance. We did this by sending to the Commissioner of Finance copies of the documents sent to the Governor's Office for review and approval by the Governor's Office prior to the Board publishing the Dual Notice. We sent the copies on November 6, 2008. The documents included: the Governor's Office Proposed Rule and SONAR Form; draft rules; and the almost final SONAR. Department of Finance Executive Budget Officer Ryan Baumtrog responded as follows in a letter dated November 24, 2008: "In my opinion, the proposed changes will not impose a significant cost on local governments."

### **COST OF COMPLYING FOR SMALL BUSINESS OR CITY**

#### **Agency Determination of Cost**

As required by Minnesota Statutes, section 14.127, the Board has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed \$25,000 for any small business or small city. The Board has determined that the cost of complying

with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city. The Board has made this determination based on the probable costs of complying with the proposed rule, as described in the Regulatory Analysis section of this SONAR on page 4. The probable costs are expected to be the costs of purchasing new code books, and modifying training curricula to reflect the amendments. These costs will not exceed \$25,000 for any small business or small city during the first year after the rules take effect.

## LIST OF WITNESSES

If these rules go to a public hearing, the Board anticipates having the following witnesses testify in support of the need for and reasonableness of the rules:

1. Mr. Todd Green, Chief High Pressure Piping Inspector, Department of Labor and Industry, who is also the Commissioner's representative on the Board, will provide technical information about the high pressure piping code and the need for rule amendments in both the code and licensing areas.
2. Mr. Larry Stevens, Jr., Chair, Minnesota Board of High Pressure Piping Systems, will testify about the Board's interest in adopting the national codes, with amendments, and in adopting amendments to the licensing and registration rules.
3. Other Board members and Department of Labor and Industry staff, if necessary.

## RULE-BY-RULE ANALYSIS

### Definitions and Rules Regarding Licensing and Registration

#### **5230.0005 Definitions**

Subp. 1. Scope. It is reasonable to cross-reference the statutes as well as the rules to which the definitions apply, for the sake of clarity.

Subp. 2. Administrative authority. This definition is needed because the term "administrative authority" is used throughout Chapter 5230. The definition is reasonable because it is a useful short form for the entity that performs inspections in a particular area of the state.

Subp. 3. Ammonia piping system. This definition is needed because the term is used in proposed subpart 10 and proposed part 5230.5000.

Subp. 4. ASME. This definition is needed and reasonable because the acronym ASME is used throughout chapter 5230 and means American Society of Mechanical Engineers.

Subp. 5. Bioprocess piping. This definition is needed because the term is used in proposed subpart 6 and proposed part 5230.0220. The definition is reasonable because it is the definition used in the most current version of the ASME BPE, which is adopted by reference in proposed part 5230.0220,



subpart 1.

Subp. 6. Bioprocess piping system. This definition is needed because the term is used in proposed subpart 10 and proposed part 5230.0220.

Subp. 7. Contractor. This definition is needed and reasonable because it is a useful short form for the entity which, by statute, must hold the business license.

Subp. 8. Department. This definition is needed because the rules refer to "Department." This definition is reasonable because it is identical to the definition in Minnesota Statutes, section 326B.01, subd. 4.

Subp. 9. Direct Supervision. This definition is needed and reasonable to further clarify existing rules regarding the direct supervision of unlicensed individuals assisting in the construction of high pressure piping systems. It is modeled closely after the requirements found in current electrical licensing law, Minn. Stat. § 326B.31, subd.16, governing the direct supervision of unlicensed individuals performing electrical work, and requirements found in current plumbing licensing law, Minn. Stat. § 326B.42, subd. 2, governing the direct supervision of unlicensed individuals performing plumbing work (plumber's apprentices).

Subp. 10. High pressure piping system. This definition is needed because the term is used throughout Chapter 5230. This definition is reasonable because it is consistent with Minn. Stat. § 326B.91, subd. 4.

Subp. 11. High pressure piping work. This definition is needed because the term is used in proposed subpart 9 and proposed part 5230.0035, subparts 2 and 5, and proposed part 5230.0045, subpart 1. It is a reasonable short-form for the work requiring a license under Minn. Stat. § 326B.921, subd. 1.

Subp. 12. Other medium used for heating. This definition is needed because the term is used in Minn. Stat. § 326B.91, subd. 4. The definition is reasonable because it is consistent with the past and present interpretation of the term by the Department's high pressure piping inspection unit.

Subp. 13. Pipefitting laws. This definition is needed because the term is used in proposed part 5230.0045, subpart 3. It is reasonable because the laws referenced are the statutes regarding high pressure piping, the Board's rules regarding high pressure piping, and the Department of Labor and Industry's rules regarding high pressure piping.

Subp. 14. Piping system. This definition is needed because the term is used in proposed subparts 3, 6 and 18. It is reasonable because it is consistent with common use and understanding in the industry.

Subp. 15. Power piping system. This definition is needed because the term is used in Minn. Stat. § 326B.92, subd. 2. This definition is reasonable because a power piping system is commonly understood in the industry to mean a high pressure piping system.

Subp. 16. Repairs on an existing installation. This definition is needed to affirm the past and current interpretation by the Department's high pressure piping inspection unit of the term "repairs on existing installations," found in Minn. Stat. § 326B.921, subd. 1. The term has historically been a point of contention, as some owners and contractors believe this allows for the complete change out of high pressure piping systems including the welding of new piping joints so long as no additions or alterations are made. The Board feels the proposed definition is reasonable because it allows for the replacement of manufactured mechanical piping components in existing high pressure piping systems that would not require extensive pipefitting or pipe welding acumen.

Subp. 17. Steam or heating media piping. This definition is needed because the term is used in proposed subpart 18. It is reasonable because it is consistent with Minn. Stat. § 326B.91, subd. 4.

Subp. 18. Steam or heating media piping system. This definition is needed because the term is used in proposed subpart 10 and proposed parts 5230.0250 and 5230.0335. It is a reasonable short-form for the phrase "piping system for steam or heating media piping."

### **5230.0035 Registration of Unlicensed Individual**

This rule was added in order to provide clarification and direction regarding the registration of unlicensed individuals, consistent with Minn. Stat. § 326B.921, subs. 3 and 4.

Subpart 1. Scope. This subpart is needed and reasonable because, by statute, pipefitter apprentices are excluded from the registration requirement. *See* Minn. Stat. § 326B.921, subd. 3.

Subp. 2. Unlicensed individual registration requirement. This rule explains the age requirements for applicants, and re-states the registration requirements under Minn. Stat. § 326B.921, subs. 3 and 4. The 18 year age requirement is reasonable because, by rule, an individual must ordinarily be at least 18 to be employed in various occupations, including "[i]n any occupation or activity, or on any site, which is hazardous or dangerous to life, limb, or health." Minn. R. 5200.0910 (S) (2007). High pressure piping work is hazardous.

Subp. 3. Information required to be provided by applicant on initial and renewal registration application. This rule explains the information applicants must provide at the time of initial and renewal application. Requiring this information is reasonable because it is basic identification information or contact information that the department needs for communicating important information. The applicant's social security number is required under the tax clearance statute, Minnesota Statutes, section 270C.72, subdivision 4.

Subp. 4. Change in information. This rule explains the need to notify the department within 30 days of any information changes by the unlicensed individual. This subpart is necessary to ensure that the department's databases are current and accurate.

Subp. 5. Registration card. This rule requires that individuals carry their card on their person so that their registration can be easily verified on the job site.

### **5230.0045 Competency Licensing Requirement**

This rule was added in order to provide clarification and direction regarding competency licensing requirements, consistent with Minn. Stat. § 326B.921, subs. 1 and 2.

Subpart 1. License required. This rule requires that individuals carry their license on their person so that their licensure can be easily demonstrated on the job site.

Subp. 2. Construction. This rule is reasonable because it is consistent with the Minnesota Statutes. Section 326B.90 states that the department shall supervise all high pressure piping used on all projects in Minnesota. That means all piping used in the state, regardless of where it is constructed.

Subp. 3. Remedies required for licensing violations.

It is reasonable to require removal of pipe that has not been constructed or installed by a licensed person, where licensure is required. Minn. Stat. § 326B.921, subd. 1, prohibits the construction or installation of high pressure piping by persons without a high pressure pipefitter competency license. Licensed persons are required to possess and demonstrate an acceptable level of knowledge and workmanship. Therefore, when work is performed by unlicensed persons, there is a greater possibility that the work is of questionable integrity. It is often impossible to tell by visual inspection whether piping is sound after the installation is complete. Moreover, complete nondestructive testing of the system to verify fabrication methods and materials would be prohibitively expensive. It is therefore reasonable to require removal of piping constructed or installed by unlicensed persons, and replacement with piping constructed and installed by a properly licensed person.

### **5230.0060 Competency License Applications**

Subpart 1. Contracting high pressure pipefitter and journeyman high pressure pipefitter licenses.

This amendment is needed for consistency with the wording in the current Minnesota Statutes: “contracting high pressure pipefitter” and “journeyman high pressure pipefitter.” Minn. Stat. § 326B.921, subd. 1. The reason to make a person who fails the exam wait one month before taking the exam again is to allow the applicant an opportunity to improve his or her competency, rather than merely passing the test through repetition. It is reasonable to require applicants to reapply and pay a fee each time they take the test so that the Department can recoup its costs.

### **5230.0070 Contracting High Pressure Pipefitter Qualifications; and**

### **5230.0080 Journeyman High Pressure Pipefitter Qualifications**

This amendment is needed for consistency with the wording in the current Minnesota Statutes: “contracting high pressure pipefitter” and “journeyman high pressure pipefitter.” Minn. Stat. § 326B.921, subd. 1. The examination passing requirement is changed to read “with a weighted score of” and “out of 100”. This is needed and reasonable because the test developed by the Department and a third party has more than 100 points of varying credit and uses a weighted average. In addition, there is no longer a “council,” so this term needs to be replaced with “department.”

### **5230.0090 Examination of Applicants for Competency Licenses**

This rule sets the requirements for re-taking the exam after failing it.

Subpart 1. Contents. It is reasonable to delete the word “oral” because, unless required by a disability, no portion of the exam is oral. The other changes in this subpart are for clarity.

Subpart 3. Test results. These changes are needed and reasonable for clarity. It is reasonable to require applicants who fail the examination to wait at least one month before re-taking the examination because this will allow the applicant an opportunity for further education and training needed to obtain a passing score.

### **5230.0095 High Pressure Piping Business Licenses**

This rule is needed to clarify the requirements for a High Pressure Business License as set forth in Minn. Stat. § 326B.921, subd. 2.

Subpart 1. High pressure piping business license required. This rule makes clear the requirement of a high pressure piping business license prior to obtaining a permit to construct or install high pressure piping.

Subp. 2. High pressure pipefitting business license procedure. This rule sets forth the procedure in obtaining a high pressure business license including documentation requirements.

Subp. 3. Affiliation with licensed high pressure contracting pipefitter. This rule makes clear the requirement that a high pressure piping business have a contracting high pressure pipefitter as a full-time employee at all times.

### **5230.0120 Rights of Licensed Contracting High Pressure Pipefitter**

This proposed change is needed for consistency with the wording in the current Minnesota Statutes: “contracting high pressure pipefitter” and “journeyman high pressure pipefitter.” Minn. Stat. § 326B.921, subd. 1.

### **5230.0180 Surrender of License upon Revocation**

This proposed change clarifies to whom the license will be surrendered, and eliminates outdated language.

### **5230.0190 Duplicate Licenses**

This proposed change clarifies that the department issues duplicate licenses.

### **Code for Bioprocess Piping**

### **5230.0220 Bioprocess Piping**

Subpart 1. ASME BPE. The purpose of the adoption of the ASME BPE is to incorporate a nationally recognized standard. This nationally recognized standard is updated and reviewed at regular intervals. The edition adopted (2005) is the most current version of this standard.

Subpart 2. Examination of welded pipe joints. This section adopts the visual acceptance standards for welded joints as set forth in the ASME BPE. This is reasonable for consistency with the proposed examination standards for other high pressure piping. *See* proposed rules 5230.0335 and 5230.5915, subpart 6.

### **Code for Steam or Heating Media Piping Systems**

#### **5230.0250 Minimum Standards**

This part is renamed for clarity. In addition “power” is deleted and “steam and heating media” inserted for consistency with Minn. Stat. 326B.91, subd. 4, which includes the phrase “other medium used for heating.”

#### **5230.0260 Scope**

This part is modified to remove the redundant temperature and pressure limitations which are already in statute. *See* Minn. Stat. § 326B.91, subd. 4. In addition, the edition of the ASME code and the Publisher’s address was included in this section of rules. It is reasonable to incorporate the 2007 edition of the ASME code by reference because that is the most recent edition of the ASME Code for Power Piping.

#### **5230.0265 Adoption of ASME B31.1 by Reference**

This proposed part would adopt the 2007 edition of ASME B31.1 as the code of reference for the Minnesota code for steam or heating media piping systems. The existing code leaned heavily on the 1955 edition of American Standards Association (ASA) B31.1, now the ASME B31.1 power piping code. The proposed rule would update the Minnesota code to the 2007 edition of ASME B31.1, which is the most recent edition of ASME B31.1.

#### **5230.0275 Chapter I, Scope and Definitions**

This section from the adopted ASME B31.1 code is modified to reflect the pressures and temperatures found in Minn. Stat. § 326B.91, subd. 4.

#### **5230.0285 Chapter II, Design**

Subpart 1. Parts 1 and 2. Parts 1 and 2 of the adopted ASME B31.1 code are proposed to be recommended rather than mandatory in the Minnesota code because parts 1 and 2 cover design. Design is not currently part of the Minnesota code and its adoption would be an expansion of the scope of the existing Minnesota code. Although parts 1 and 2 have some merit and should be recommended for best practices, they are not needed for the protection of public health and safety.

Subp. 2. Section 122.5.1. This section of the adopted ASME B31.1 code is modified to include an existing Minnesota-specific code requirement. *See* current rule 5230.0360, subp. 4.

Subp. 3. Section 122.7;

Subp. 4. Section 122.8; and

Subp. 5. Section 122.9. These sections of the adopted ASME B31.1 code are deleted because the

piping systems that they cover are not regulated by current Minnesota high pressure piping laws. These piping systems include liquid fuel system, gas flammable gas and toxic fluids, and corrosive liquids and gases.

Subp. 6. Section 122.11.2. This section of the adopted ASME B31.1 code is modified to include an existing Minnesota-specific code requirement. *See* current rule 5230.0470, subp. 5.

#### **5230.0295 Chapter III, Materials**

This section of the adopted ASME B31.1 code is modified to reflect the Minnesota rule of not allowing furnace welded pipe at higher pressures. *See* current rule 5230.0780. The 1955 edition of B31.1 and the Minnesota code allowed for the use of furnace welded pipe at pressures less than 125 psi. The 2007 version of B31.1 does not have the pressure breaks found in the 1955 version. Therefore, the Board has decided not to allow this type of pipe in any steam application.

#### **5230.0305 Chapter VI, Inspection, Examination, and Testing**

This section of the adopted ASME B31.1 code is deleted because it is not currently part of the scope of the existing Minnesota high pressure piping code.

#### **5230.0315 Chapter VII, Operation and Maintenance**

This section of the adopted ASME B31.1 code is deleted because it is not currently part of the scope of the existing Minnesota high pressure piping code.

#### **5230.0325 Appendices**

These sections of ASME B31.1 are made non-mandatory and added for informational purposes only. Although these requirements have some merit and should be recommended for best practices, they are not needed for the protection of public health and safety.

#### **5230.0335 Examination of Welded Pipe Joints**

This section adopts the visual acceptance standards for welded joints as set forth in ASME B31.1. This is reasonable for consistency with the proposed examination standards for other high pressure piping. *See* proposed rules 5230.0220, subpart 2; and 5230.5915, subpart 6.

### **Code for Ammonia Refrigeration Systems**

#### **5230.5001 Incorporations by Reference**

The purpose of the adoption of the standards ANSI/IIAR 2 and ASME B31.5 is to incorporate nationally recognized standards that were referenced in the original code in sections 5230.5010 and 5230.5015. These nationally recognized standards are updated and reviewed at regular intervals. The editions adopted (the 2008 edition of ANSI/IIAR 2 and the 2006 edition of ASME B31.5) are the most current versions of these standards. The present Minnesota ammonia code was developed in the early 1990s, and is outdated.

#### **5230.5003 Section 3, Definitions**

This proposed part defines items not specifically defined in ANSI/IIAR 2 or in ASME 31.5. The terms "brine" and "jurisdictional authority" are used in ANSI/IIAR 2, and the term "liquid line" is

used in proposed part 5230.5005, subp. 1. The definitions of “brine” and “liquid line” are reasonable because they are consistent with common understanding in the industry. The definition of “jurisdictional authority” is reasonable for consistency with the definition of administrative authority in proposed part 5230.0005, subp. 2.

### **5230.5005 Section 10, Piping**

This proposed part is necessary to add additional safety in the materials of construction for an ammonia system.

Subpart 1. Section 10.2.1.5. This addition to the national standard is needed to increase safety. It is reasonable because it is in the current Minnesota code (*see* current part 5230.5680, subpart 6).

Subp. 2. Section 10.2.2.1. This addition to the national standard is needed to increase safety. It is reasonable because it is in the current Minnesota code (*see* current part 5230.5680, subpart 6).

Subp. 3. Section 10.2.2.3. This addition to the national standard is needed and reasonable to ensure mechanical strength.

Subp. 4. Section 10.3.1.3. This proposed subpart adds to the national standard a requirement regarding the operating speed of control valve actuators. In order to increase safety, it is reasonable to ensure that the valves do not open too fast.

### **5230.5007 Section 11, Overpressure Protection Devices**

This proposed part further defines and adds specific restrictions not in the national codes that are present in the existing Minnesota code.

Subpart 1. Section 11.1.5. This proposed subpart adds to the national standard a requirement for dirt and moisture legs on the relief piping. This is reasonable because it is in the current Minnesota code (*see* current part 5230.5945).

Subp. 2. Section 11.1.6.2. This proposed subpart clarifies that rupture members must be in series with relief valves. This clarification is needed because it is not in the national standard, and is reasonable because it increases safety.

Subp. 3. Section 11.2.5. This proposed subpart would require a three way valve on large pressure vessels. This is needed and reasonable to ensure the ability to have a back-up relief valve available in an upset situation. It also provides a safer method for accomplishing required periodic maintenance and replacement of the relief valve(s).

### **5230.5009 Section 15, Testing and Charging**

This proposed part further defines the testing requirements in ANSI/IIAR 2. It is needed because the requirement for testing in the national standard does not define a “declaration” or state who must sign it. The proposed language is reasonable because it is consistent with current part 5230.6100, subp. 6.

### **5230.5915 Piping Joints**

This proposed part further defines and adds specific restrictions not in the national codes that are present in the existing Minnesota Code.

Subpart 1. Design standards. The changes in this section correct an overly stringent specification that is in the existing Minnesota Code and aligns it with the national standard. It is reasonable because the safety of the systems is not reduced.

Subp. 2. Branch, run-outs, laterals, and saddles. The changes in this section clarify the requirements when utilizing carbon steel and stainless steel materials. It is reasonable because the requirements for carbon steel material are consistent with the existing Minnesota Code and the requirements for stainless steel material follow a recognized national standard.

Subp. 6. Examination of welded pipe joints. This requirement is necessary and reasonable in order to be consistent with ASME Section IX and ASME B31.5 which provide specific test criteria for weld examination.

### **Welding Qualification**

#### **5230.5920 Qualification of Welding Procedures, Welders, and Welding Operators**

Subpart 1. Scope. This subpart combines welding qualification rules for all high pressure piping systems. Current rules have welding qualifications specified in chapters for each type of system. This rule will relieve redundancy.

Subp. 2. Incorporation by reference. This subpart adopts the 2007 edition of ASME Section IX as the code for the qualification of welding procedures, welders, and welding operators. Existing rules in both high pressure steam and ammonia refrigeration allow for the use of ASME Section IX for welding qualifications. This subpart is needed to bring all welding qualifications under the same nationally recognized code. The 2007 edition is the most current edition of ASME Section IX.

Subp.3. Welding qualifications. This subpart is comparable to current rule 5230.5925, subp. 3.

Subp.4. Retest and renewal of welder qualification. This subpart provides guidelines for the initial testing, for re-testing, and for maintaining welding qualifications.

Subp.5. Weld procedure and qualification requirements. This subpart is comparable to current rule 5230.5925, subp. 5.

Subp.6. Evaluation standards. This subpart is comparable to current rule 5230.5925, subp. 10.

Subp.7. Documentation required. This subpart is comparable to current rule 5230.5925, subp. 12.

Subp.8. Welder identification and log requirement. This subpart is comparable to current rule



5230.5925, subp. 14, with the addition of requirements under ASME Section IX.

Subp.9. Contractor responsibility. This subpart is comparable to current rule 5230.5925, subp. 15.

### **Repealer**

Part 5230.0050 has been superseded by Minnesota Statutes, section 326B.921.

Part 5230.0090, subpart 2, concerns grading of examinations. This subpart is not needed because the grading requirements are included in proposed part 5230.0070, item G, and proposed part 5230.0080, item E.

Part 5230.0100: Subpart 2 concerns applications for renewal. This subpart is not needed because it has been superseded by Minnesota Statutes, section 326B.922. Subpart 3a concerns high pressure pipefitting business licenses. This subpart is not needed because the requirements are included in proposed part 5230.0095 and in Minnesota Statutes, section 326B.921, subdivision 2. Subpart 6 concerns the fee for registration as a pipefitter trainee. This subpart is not needed because it has been superseded by Minnesota Statutes, 326B.921, subdivision 4.

Part 5230.0115 concerns pipefitter trainees. By statute, the term "pipefitter trainee" has been replaced with "unlicensed individual." *See* Minnesota Statutes, section 326B.921, subdivision 3. Part 5230.0115 has been replaced with proposed part 5230.0035 regarding unlicensed individuals.

Part 5230.0130, concerning the duties of licensed contracting pipefitters, is unnecessary because it merely repeats requirements to comply with laws codified elsewhere.

Part 5230.0140, concerning display of licenses, is not needed because the requirement that pipefitters carry their licenses is contained in proposed part 5230.0045, subpart 1.

Parts 5230.0150, 5230.0160 and 5230.0170 are obsolete because there is now a statutory requirement for the business to carry a license. *See* Minnesota Statutes, section 326B.921, subdivision 2.

Parts 5230.0200 and 5230.0210 have been superseded by the new statute on licensing orders, Minnesota Statutes, section 326B.082, subdivision 11.

Parts 5230.0270 through 5230.1060 need to be repealed because the proposed rules replace the existing code for power piping with sections adopted from ASME B31.1. *See* proposed parts 5230.0250 to 0230.0335.

Parts 5230.1070 through 5230.1270 need to be repealed because they are replaced in the proposed rules with sections adopted from the ASME Section IX. *See* proposed part 5230.5920.

Parts 5230.5010 through 5230.5825 and parts 5230.5925 through 5230.6200 need to be repealed because they are replaced in the proposed rules with sections adopted from ANSI/IIAR 2 and ASME B31.1. *See* proposed parts 5230.5000 to 5230.5915.

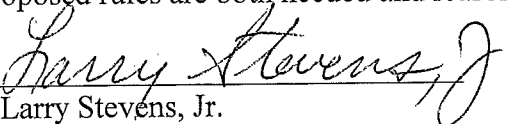
**Effective Date**

The effective date of August 1, 2010 for the amendment of Minnesota Rules, part 5230.0005, subpart 16, is needed and reasonable to give affected parties time to seek legislation that would make allowances for welded repairs on existing installations, or otherwise train and license their workforce to comply with the high pressure piping statutes and rules. The effective date for all other amendments was selected to bring Minnesota under a current code in a reasonable time and also allow time for municipalities, contractors and individuals to secure code books after publication of the rules.

**CONCLUSION**

Based on the foregoing, the proposed rules are both needed and reasonable.

December 9, 2008

  
Larry Stevens, Jr.  
Chair, Board of High Pressure Piping Systems