DEPARTMENT OF TRANSPORTATION

Office of Pipeline Safety Operations

[Docket No. Pet. 76–11W]

TRANS-ALASKA CRUDE OIL PIPELINE

Grant of Waiver

By petition dated October 18, 1975, the Alyeska Pipeline Service Company (Alyeska) requested that the pipe bending requirement of 49 CFR 195.212(e) be repealed and, in the interim, that Alyeska be granted a waiver from compliance with the requirement with respect to the Trans-Alaska crude oil pipeline. Section 195.212(e) (now §195.212(b)(3)) provides that for each field bend of steel pipe containing a longitudinal weld, "the longitudinal weld must be as near as practicable to the neutral axis of the bend." In its petition, Alyeska alleged that this requirement is unnecessary for the quality or integrity of a pipeline.

In response to Alyeska's request, the Materials Transportation Bureau (MTB) sought additional information from Alyeska to show why the bending requirement is not necessary as alleged. In addition, in connection with a separate rulemaking proceeding on pipe bending, MTB asked interested persons to submit technical information on whether it is unnecessary from a safety standpoint for a longitudinal weld to be located near the neutral axis during bending (Docket No. OPS–23, Notice 75–7, 40 FR 60076, Dec. 31, 1975). The information submitted by Alyeska and commenters to Notice 75–7 is summarized as follows: First, a recommended safety practice that longitudinal seams be near the neutral axis initially appeared in the 1966 edition of the industry code for liquid pipelines. American National Standards Institute B31.4 Code, which served as a basis for §195.212(b)(3). This safety practice was developed prior to general usage of the internal bending mandrel and was intended to prevent damage to pipe at the weld seam by the die or stiffback during bending. The recommended practice was not included, however, in the 1975 edition of the B31.4 Code primarily because use of the internal bending mandrel to provide support for pipe prevents it from being damaged during bending. The fact that protruding welds on spiral welded pipe had been regularly placed against the die or stiffback during bending without consequent damage to the pipe also led to the 1975 deletion. Secondly, thousands of bend sections were installed before the advent of the recommended practice or requirement that the longitudinal seam be near the neutral axis, and there has not been a single liquid pipeline accident reported under 49 CFR Part 195 which was caused by failure of a weld seam in a bend section. Thirdly, the likelihood that stresses during bending will not adversely affect the integrity of a longitudinal seam weld is enhanced by the recent improvements in seam welding technology, quality control, and materials chemistry. Fourthly, modern bending machines and internal bending mandrels commonly used by industry provide control and protection of the pipe, especially large diameter high strength thin wall pipe where damage would be more likely to occur, which was unavailable as recently as 10 years ago. Finally, burst test data obtained on the Portland-Montreal pipeline system in 1965 for 24-inch X–52 steel pipe shows that with seams on both the inside and outside of the bend, ruptures occurred in the body of the pipe without damage to the weld seams.

After considering all available information, MTB finds that under modern pipe manufacturing and bending techniques, there is little, if any, risk of pipe damage from placing a longitudinal seam in a position other than near the neutral axis during bending. This finding is further supported by test data, the current recommended industry bending practice, and the absence of reported failures due to bending in MTB failure records. Moreover, if damage does occur at a longitudinal seam during bending, the bend would be rejected under other performance standards for pipe bends in §195.212. Accordingly, subject to the following conditions, the granting of Alyeska's request for waiver from 49 CFR 195.212(b)(3) appears appropriate and in the public interest, and the waiver is hereby granted effective immediately:

1. All bends must be made using an internal bending mandrel.

2. Alyeska shall report all unacceptable seam damage due to bending and bend failures during testing to MTB.

Because of the significance of the findings herein, MTB will issue a notice of proposed rulemaking to modify the general requirement in 49 CFR 195.212(b)(3) consistent therewith.

(Sec. 6, Pub. L. 89–670, 80 Stat. 937 (49 USC 1655); (18 USC 831–835); 40 FR 43901, 49 CFR 1.53).

Issued in Washington, D.C., on August 3, 1976.

JAMES T. CURTIS, Jr.,
Director,
Materials Transportation Bureau.

[FR Doc. 76–23498 Filed 8–11–76; 8:45 am]