

Proven Performance

USS MARINER steel piling has been rigorously tested under a wide variety of conditions for many years. The results of this long term, intensive measurement of performance indicate that it is far superior in resistance to corrosion from sea water than carbon steel. In addition, it possesses all the desirable qualities of conventional steel piling, plus significantly greater strength.

Based upon the proof of these desired performance characteristics, it has already been selected and used in a great number of projects in coastal waters and inland locations. Here too, it is proving to be an ideal materials selection in that it is providing greatly extended service life for these important facilities. Where performance is important, USS MARINER steel piling is the **proven** answer.

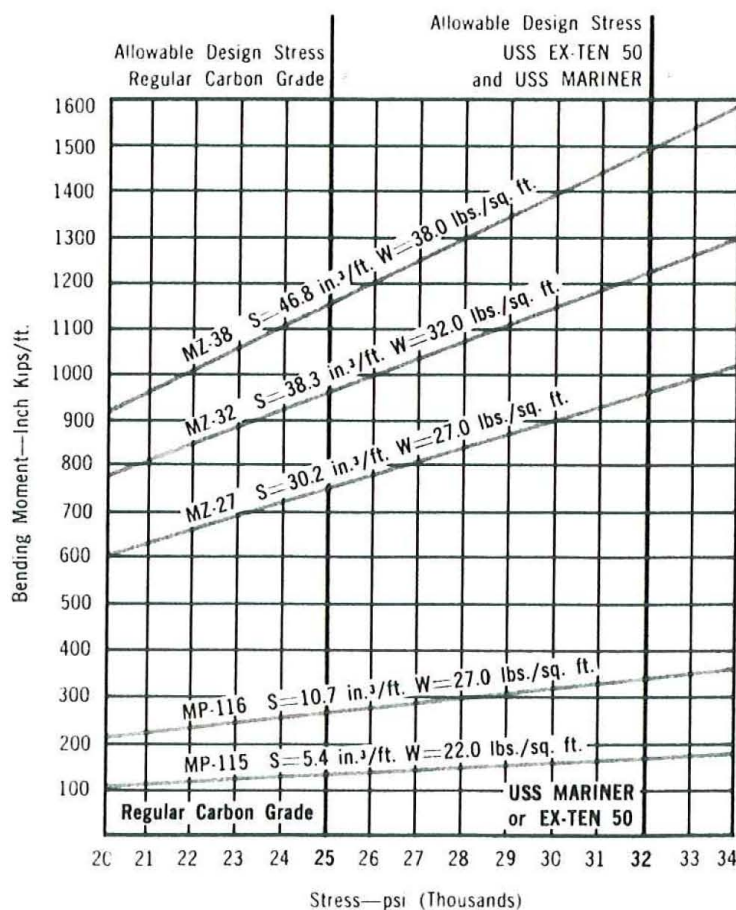
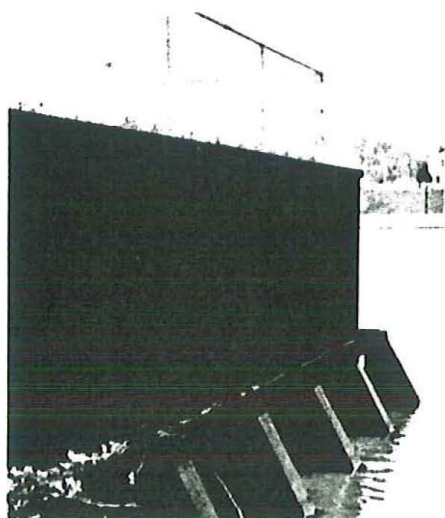


Since USS MARINER Steel is also a high-strength low-alloy steel having a guaranteed minimum yield point of 50,000 psi, it generally offers a considerable economy over ASTM A328 steel because of the 25% higher allowable working stress. The generally accepted design stress for use with ASTM A328 steels having a minimum yield point of 38,500 psi is 25,000 psi. A 32,000 psi design stress is suggested for USS MARINER Steel, which provides an equivalent safety factor. The graph in Figure 16 contains a comparison of the two steels for the various steel sheet piling sections.

The maximum bending moment in a bulkhead occurs well below the water line where the corrosion rate is lowest or can be readily controlled, if necessary, through cathodic protection. Steel structures which appear to be deteriorated by corrosion above water may be in good condition and structurally safe below. Many designers obtain an effective, balanced, useful life by providing protection above low water and no protection below.

USS MARINER Steel will, in many cases, be an effective means to accomplish this balance at lowest cost. Furthermore, when bulkheads are designed at conventional stress levels, USS MARINER Steel provides a larger reserve strength against ultimate losses in thickness regardless of where they occur on the bulkhead.

Steel Sheet Piling



Permanent stresses based on generally accepted design practice

Figure 16