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This True Ball Joint Makes the Difference

Dart Unions are leakproof because they're precision-machined to a true ball joint... then spherically ground for wide, true-bearing surfaces. If you want no leaks — you want Darts!

QUICK FACTS

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More TECHNICAL BRIEFS

might be extended by the application of antiseptic compounds to minimize fungal attack. API Paper, no number.

Vessel Construction

Alternate Types of Vessel Construction — A Cost Comparison. By I. E. Baker and W. R. Fickett, Chicago Bridge and Iron Co.

This paper deals briefly with some of the economic aspects of pressure-vessel design as influenced by a consideration of graphitization at elevated temperatures.

The occurrence of serious graphitization is not always predictable in advance. In many operations the financial loss which results from an unplanned shutdown is so tremendous that a relatively unpredictable risk cannot be justified. As one operator remarked after the failure of an important vessel: "I could afford to build every such vessel of solid stainless, if by so doing I could avoid one shutdown."

That remark was figurative rather than literal, but it focuses attention on the trend toward the consideration of graphitization-resistant construction even at some increase in first cost. So an increase might be insurance.

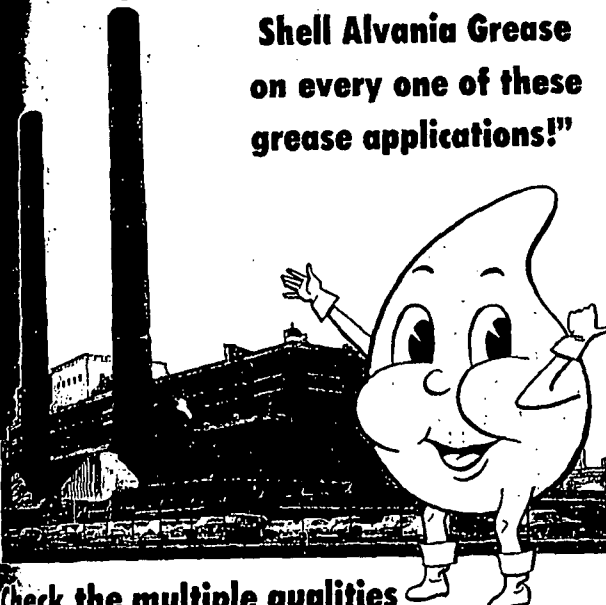
To shed some light on the subject of first cost, it was suggested that it would be helpful to develop comparative information on several available alternatives. The alternate types of construction were selected by the committee in charge of this program, and the sole purpose of this paper is to evaluate them. Discussion of the merits of one alternative over another is left for the papers of a more technical nature.

A first-cost investment in graphitization-resistant construction at some additional expense might, within limits, be considered as insurance. This paper evaluates first cost, as it applies to plate construction, of ASTM A 285, A 201, and graphitization-resistant A 301 steel at operating temperatures of 900 F, 950 F, and 1,000 F. Consideration is given to designs where internal insulation is employed—permitting design temperatures of not more than 650 F, as well as designs utilizing external insulation only and employing unit stresses prescribed for these elevated temperatures by API-ASME Code for the Design, Construction, Inspection, and Repair of Unfired Pressure Vessels for Petroleum Liquids and Gases.

Stated assumptions have been made relating to the cost of insulation, stress relief and radiographing. It should be

Directions for ordering papers on p. 174

Indianapolis Power & Light Company's large new White River plant uses Shell Alvania Grease on every one of these grease applications!"



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Shell Alvania Grease is effecting important improvements in plant maintenance and purchasing practices. In plant after plant, this one grease is replacing the many special purpose greases formerly used... in every grease application in the plant!

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Shell Alvania Grease flows freely in cold temperatures, yet will

not run out of bearings under excessive heat.

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3. Shell Alvania Grease has extremely high oxidation stability.

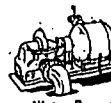
4. You'll find that Shell Alvania Grease extends time between greasings... a substantial saving in labor and grease.

5. Simple inventory... just the one grease to stock and apply.

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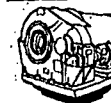
Electric Motors



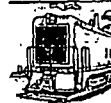
Water Pumps



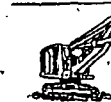
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