

LEAD INDUSTRIES ASSOCIATION

400 LEXINGTON AVENUE 60 East 42nd Street

NEW YORK 17, N. Y.

October 5, 1956

SUBJECT: CRITICISM OF RED LEAD
TECHNICAL LETTER No. 11

To Members of the Red Lead Technical Committees

Attached is copy of a letter, dated September 28, 1956 from Dr. Joseph Bigos, director of research, Steel Structures Painting Council, commenting on Red Lead Technical Letter No. 11.

In Mr. Ziegfeld's absence from the city he has asked me to forward this to the Committee members for their scrutiny and remarks, which he can pass on to Dr. Bigos. Mr. Ziegfeld will return to the office on October 15.

Very truly yours,

(Hans) O. W. Weyer
Secretary to Mr. Ziegfeld.



STEEL STRUCTURES PAINTING COUNCIL

1400 FIFTH AVENUE

PITTSBURGH 13, PA.

September 28, 1956

Mr. R. L. Ziegfeld, Secretary-Treasurer
Lead Industries Association
60 East 42nd Street
New York 17, New York

Dear Mr. Ziegfeld:

I have just seen Red Lead Technical Letter No. 11. This is a fine piece of technical information which will be of great value to the people working with paints. We particularly want to thank you for the excellent publicity and recognition given the Steel Structures Painting Council.

However, I wish that you had shown this to me prior to publication because it may cause some difficulties. At the suggestion of Mr. J. O. Jackson, I want to comment to you on some aspects which have not been properly considered, particularly in regard to the use of blast cleaning. On page 5 the subject of sand or shot blasting is discussed and reference is made to Steel Structures Painting Council's Surface Preparation Specification No. 5 - S2T. This covers white metal blast cleaning. It is extremely unfortunate that the entire paper seems to have been based upon white metal blast cleaning. This type of blast cleaning is extremely expensive and is required for less than 1% of the surface area which is blast cleaned.

No mention is made of the commercial blast cleaning specification which embraces the great preponderance of actual blast cleaning operations and which is satisfactory for practically all uses. White metal blast cleaning is only required for extremely corrosive areas where linings or very, very rigid surface preparation is required -- such as for metallizing. Most water immersion and most chemical exposures are adequately covered by commercial blast cleaning without half the cost or loss of white metal blast cleaning. Brush-off blast cleaning is also used very extensively at a very economical cost because of the fast rate of cleaning. It is approximately equivalent to power tool cleaning as regards wettability of the primers, etc., but actually it is possible to use brush-off blast cleaning with most of the synthetics if the exposure is not too severe.

On page 6 under Alkali Cleaning the statement was made that alkali cleaning is less hazardous than solvent cleaning. This is not correct since there is no hazard connected with solvent cleaning provided safe solvents

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are used. Alkali cleaning on the other hand is considered to be quite hazardous. The next paragraph states that alkali cleaning does not remove rust inhibitive oils. This statement is in contradiction with the statement under Steam Cleaning on the next page which says that "If the detergent-steam-water mixture is sufficiently alkaline, it will also remove grease." It is true that some rust inhibitive oils will not be removed by alkali cleaning. However, alkali emulsion cleaning, which does come under a category of alkali cleaning will remove any rust inhibitive oil. Also, the last sentence is not quite correct when it says that the surface must be rinsed with a dilute acid water. It is quite possible to rinse the surface with fresh water and have an adequate elimination of alkali.

The first sentence of the paragraph under Steam Cleaning implies that it is used when it is impossible to solvent wipe the surface. To the contrary, steam cleaning is the better method of the two by far and solvent wiping is used when steam cleaning is impractical or too costly. The second to last sentence states that Federal Specification and ASTM Specifications cover the use of Stoddard Solvent. To the contrary, the Federal Specification and ASTM Specification cover only material requirements. In no way do they cover the use of these materials, particularly for solvent cleaning.

The charts on pages 8 and 9 which tie in surface preparation, drying time, paints, and uses, are of great value. It is unfortunate that the blast cleaning — which is what Mr. J. O. Jackson has objected to — is improperly chosen, at least from our view point. There is only one place in this chart where blast cleaning to white metal might be considered necessary and that is for structural steel in chemically contaminated atmospheres. But even here, the further classification of oil storage tanks and the use of chemically contaminated rather than chemical atmospheres automatically modifies the service to the point where commercial blast cleaning is adequate. In fact, most oil storage tanks are adequately cleaned and painted with hand cleaning or power tool cleaning. The next row covers structural steel in atmospheric exposure and recommends blast cleaning to white metal using L.I.A. 6-7 which is TT-R-86a, Type II. TT-R-86a, Type II is widely used and recommended for power tool cleaned surfaces and is in wide use satisfactorily over hand cleaned surfaces which are cleaned carefully. To indicate that blast cleaning to white metal is necessary with such a primer is going to do a great deal of harm to the painting industry. These statements are generally true for the remainder of the charts. I am enclosing a copy of the technical letter with further indication where I feel that blast cleaning specifications are far too rigid and far too costly. In addition, there are a couple of remarks concerning the use of wash primer pretreatment in place of Phosphate Pretreatment No. 2 on an alternative basis. Actually, the wash primer pretreatment is better for new galvanized steel than Pretreatment No. 2., but the option should be left to the user.

I hope that I have not been too harsh in my comments, but I am sure that you are just as much concerned in having technical information issued which is the best currently available as we are. A great deal of progress has been made recently in getting consulting engineers and fabricators to realize that blast cleaning is economical. Several of the largest fabricators are now in the process of setting up blast cleaning

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shops for fabricated structural steel. The Painting Council has worked with these people despite the early antagonism which the Painting Council received when it first advocated the use of blast cleaning. It would be unfortunate if at this time the industry got the impression that the Painting Council was advocating white metal blast cleaning for normal uses such as indicated in the preponderance of the chart items.

I neglected one comment previously. Under Phosphate Surface Treatment the statement is made that phosphate treatment leaves the surface in a satisfactory condition for maximum paint life. This is not quite true and is apt to be very misleading. I think that if you will check with Arnold Kieckhoff you will find that the phosphate treatments used over mill scale hand cleaned or flamed cleaned surfaces are actually detrimental to paint life. Over blast cleaned surfaces or pickled surfaces phosphate treatments do leave the surface in satisfactory condition for long paint life, but they are equalled or excelled in this regard by the wash primers.

Yours very truly,

JA/mlh

Joseph Higon
Director of Research

Enclosure

cc: Mr. J. C. Jackson