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Galvanized Lamp Standards Light Up The World

Cover: *The cover photo shows the lighting cluster of this galvanized steel lamp standard near Sherbrooke, Quebec, Canada*

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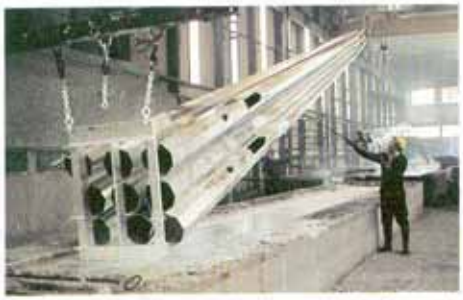
Galvanized steel lamp standards are lighting up the world from Stockholm to Singapore. Lighting poles made from steel, hot dip galvanized after fabrication, are seen on highways and city streets, in airports, sports stadiums, pedestrian malls, parking lots and many other areas because they are attractive and functional. Requiring only minimal maintenance to ensure a long service life, galvanized steel lamp standards are cost-effective, making them the first choice of engineers, designers and specifiers around the world.

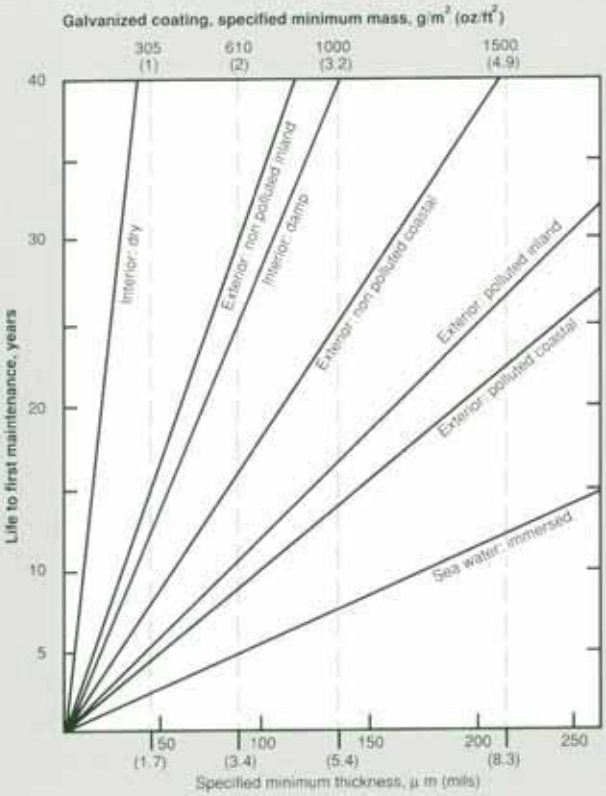
Steel is the most commonly used material in construction. It offers the advantages of structural strength, high impact resistance, ease of working and low cost.

Steel lamp standards arriving at the galvanizer's plant.



Galvanized lamp standards emerging from the bath of molten zinc.

Galvanized poles en route to the site.



Typical times to first maintenance for zinc coatings in selected environments (British Standard) BS 5493, 1977)

No other material possesses all these features to the same degree, or is as versatile in its application.

If steel is left exposed to the atmosphere, however, its inherent advantages may be completely offset by corrosion. Rust not only mars the appearance of steel and adjacent surfaces, but in severe cases reduces its strength and destroys its function.

Hot dip galvanizing is the most effective method of protecting steel against corrosion. Applied by immersing fabricated articles in a bath of molten zinc, the galvanized coating is metallurgically bonded to the underlying steel and forms an impervious barrier between the steel and the corrosive environment. Galvanized coatings withstand rough handling during shipping and erection. Furthermore, if small areas of the coating are mechanically damaged, the zinc on neighbouring areas will protect the exposed steel from corrosion by sacrificial action. If the steel is only painted, underfilm rust causes paint to blister and peel. No other commercially available coating offers zinc's characteristic double protection. Hot dip galvanizing combines the best features of steel and zinc.

The service life of a galvanized coating is predictable within a given environment (see chart). In most cases the need for costly on-site maintenance is eliminated for the entire design life of a structure. Hot dip galvanizing offers an additional advantage in that it protects the inside surface of the pole as well as the exterior, thereby totally isolating the steel from the corrosive effects of aggressive industrial atmospheres, road de-icing salts, acid rain, and run-off water.

When compared with the three major competitive materials available for lighting standards - aluminum, concrete and wood - galvanized steel is outstanding. In contrast to aluminum it offers greater strength and impact resistance. Steel is also easier to weld and fabricate - properties which are particularly attractive where

high poles and those using modular designs are required.

Steel poles can be designed with break-away bases - a safety feature demanded by many jurisdictions. Moreover, steel poles offer the strength needed to support traffic and street lighting equipment, even on long cantilevered arms which introduce additional bending and torsional stresses.

Concrete poles are heavier than comparable poles made of steel and are difficult to design with safe break-away features. Moreover, concrete poles are subject to cracking and spalling - service problems not encountered with steel.

Wooden poles have height limitations, lower strength and are vulnerable to rot, warping, fire and attack by termites and other wood boring insects.

Hot dip galvanized lamp standards are aesthetically pleasing and economical, in terms of both initial cost and subsequent maintenance requirements. They offer the lighting engineer the strength of steel and the proven corrosion protection of zinc. The result - maximum service life at minimum cost.

Light up your world with galvanized steel; it outshines the competition.

Large modular lighting poles are galvanized in sections for easier handling, shipping and on-site erection.

1. Bondi Beach Promenade, Sydney, Australia

2. Los Angeles International Airport, California, U.S.A.

3. Hydraulic columns, Melbourne, Australia

4. Municipal playground floodlights, Japan

5. Short radius davitt poles, Long Beach, California U.S.A.

6. Conduit del Ecuador S.A. Plant, Quito, Ecuador

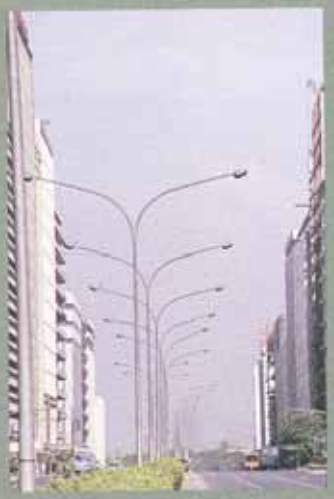
7. Hanshin Express Highway, Japan

8. Carson, California, U.S.A

9. Traffic signal bridge, California, U.S.A.

10. Soccer Stadium, Mexico City, Mexico

11. Kathmandu, Nepal



12. Ayala Ave., Makati, The Philippines

13. Railway yard, Suikerand, Bapsfontein, Republic of South Africa

14. Magog, Quebec, Canada

15. Toronto International Airport, Ontario, Canada

16. Faaa Airport, Tahiti

17. Manchester, England

18. Trail, British Columbia, Canada

19. Stockholm, Sweden

20. Municipal Park of Morges, Lake Geneva, Switzerland

21. Riverside Hotel, Seoul, Korea

22. Scheveningen Pier, The Hague, Holland

23. Laandam, Holland

24. Kuala Lumpur, Malaysia

25. Children's Grand Park, Seoul, Korea

26. A country road in southern Finland

27. Kuala Lumpur Airport, Malaysia

Cominco wishes to acknowledge the assistance of the following, who supplied photographs for use in this brochure.
Photo 1: Australian Zinc Development Association, Melbourne, Australia; Sulphide Corporation Pty. Limited, Boolaroo, Australia.
Photos 2 & 8: Union Metal Mfg. Co., and Joslyn Mfg. and Supply Co., Long Beach, California, U.S.A.
Photo 3: Australian Zinc Development Association, Melbourne, Australia.
Photos 4 & 7: Japan Galvanizers Association, Inc.; Japan Lead Zinc Development Association, Tokyo, Japan.
Photos 5 & 9: Ameron, Pole Products Division, Fillmore, California, U.S.A.; Joslyn Mfg. and Supply Co., Long Beach, California, U.S.A.
Photos 10, 11, 16, 19, 20, 22, and 23: Sir Jan van Eijnsbergen, The Hague, Holland.
Photo 12: Philippine Steel Coating Corporation, Makati, The Philippines; Zinc and Lead Asian Service, Melbourne, Australia.
Photo 13: Zinc Corporation of South Africa Limited, Johannesburg, South Africa.
Photo 15: Pure Metal Galvanizing Ltd., Toronto, Canada.
Photos 21 & 25: Korea Zinc Company, Seoul, Korea; Zinc and Lead Asian Service, Melbourne, Australia.
Photo 26: Outokumpu Oy, Helsinki, Finland.
Photos of the galvanizing operation were supplied courtesy of Scottish Galvanizers Ltd., part of the Pillar-Wedge Group, U.K. and by Metnor Galvanizing Ltd., U.K.

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