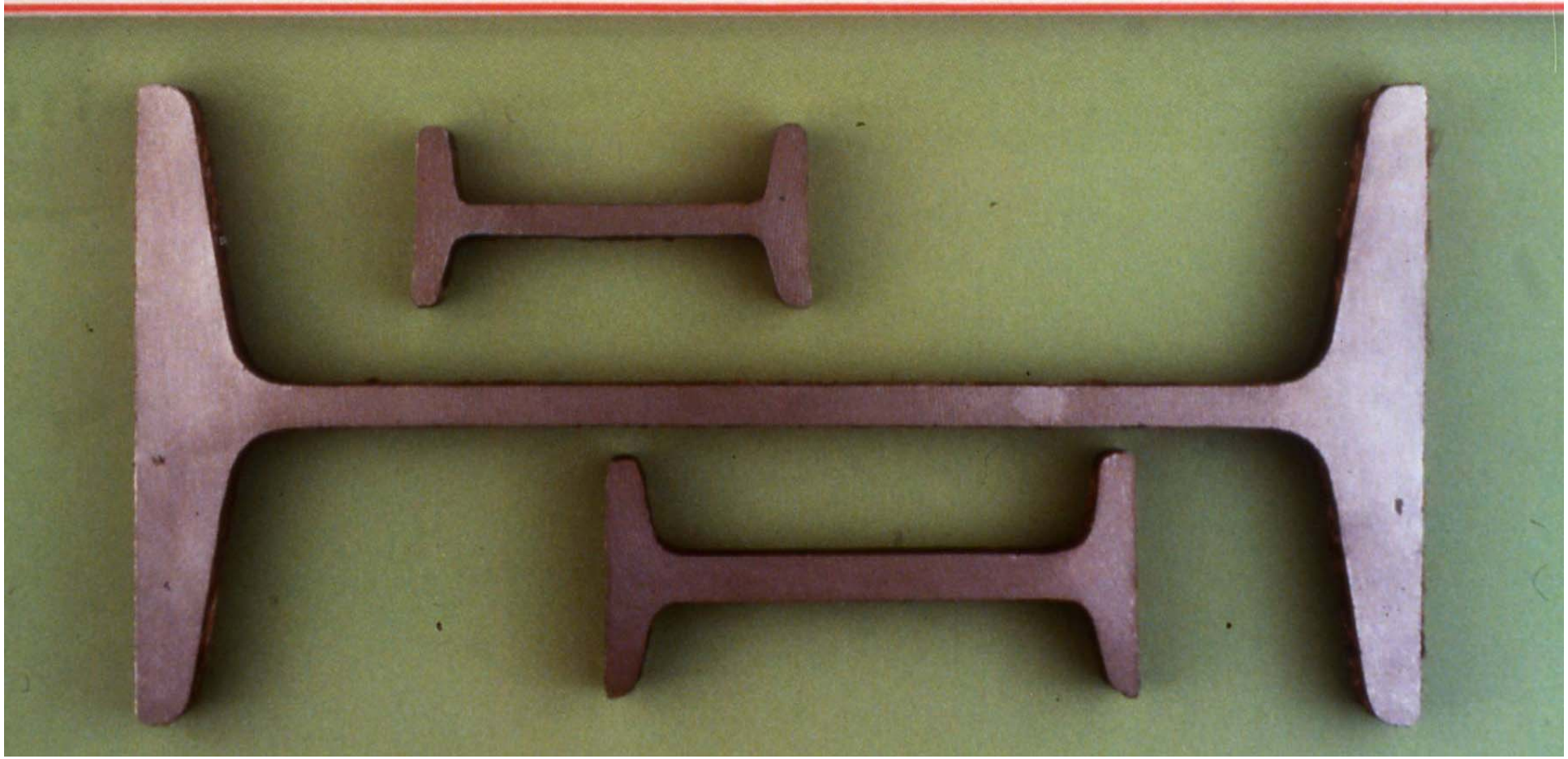
Univerza
v Ljubljani
Fakulteta za
gradbeništvo in geodezijo
Katedra za metalne konstrukcije

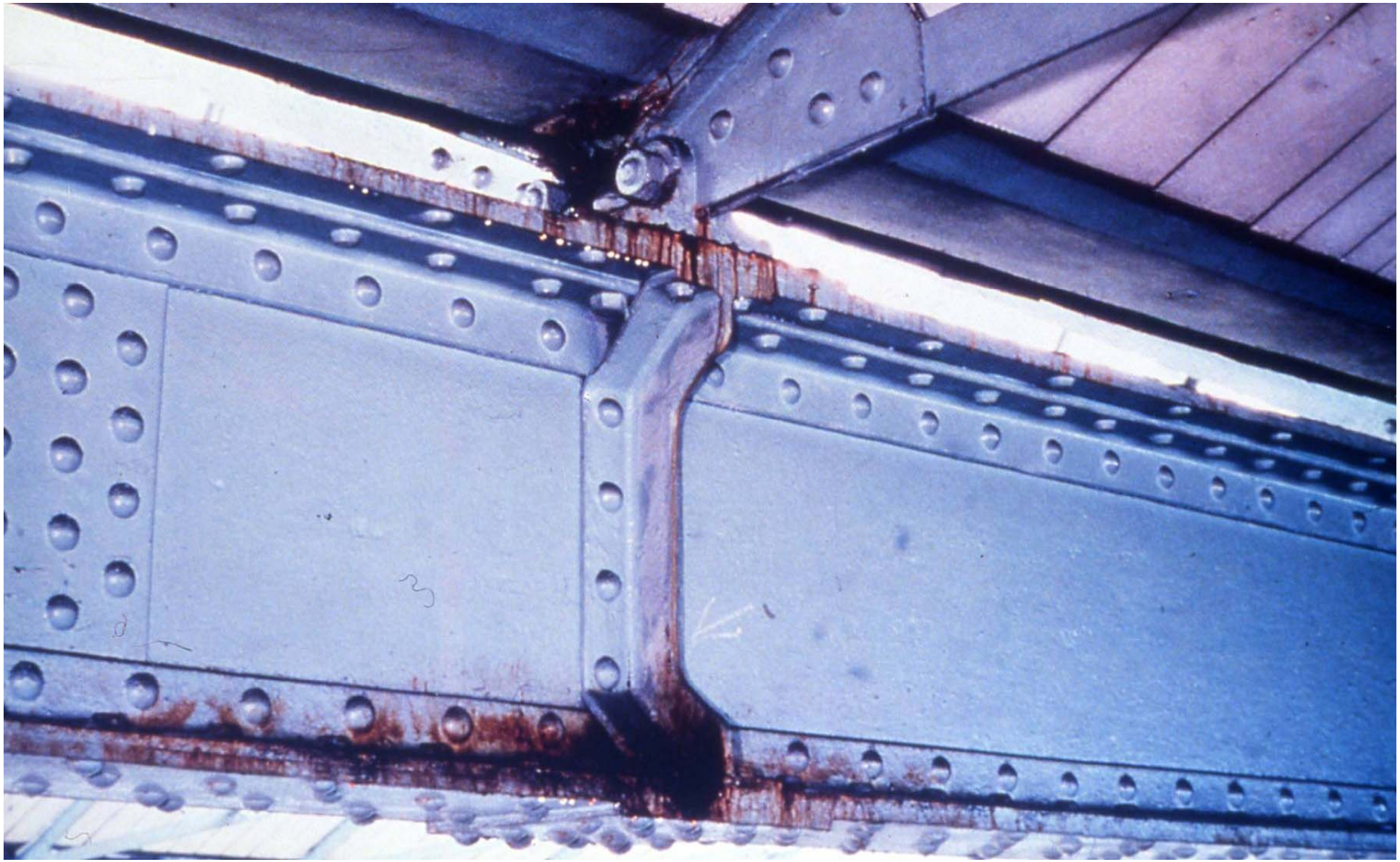
JSM

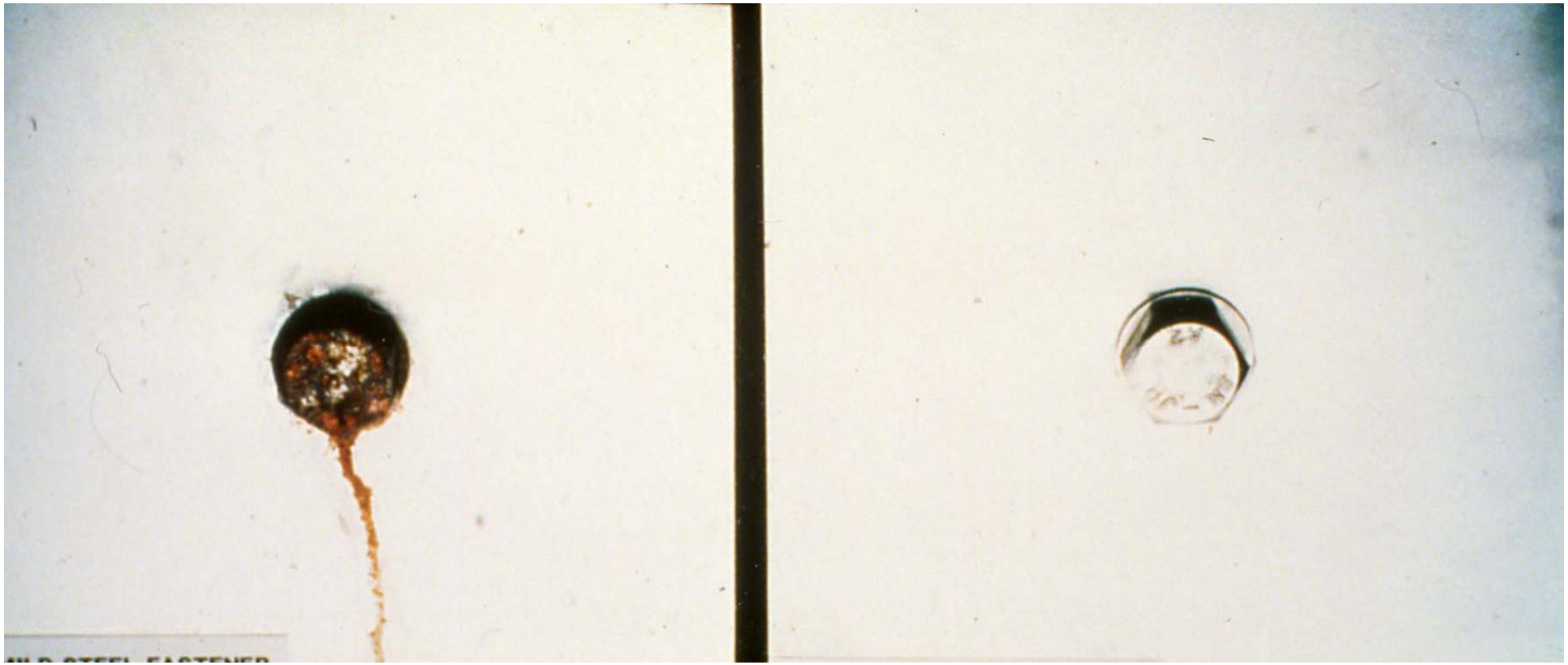
KOROZIJA

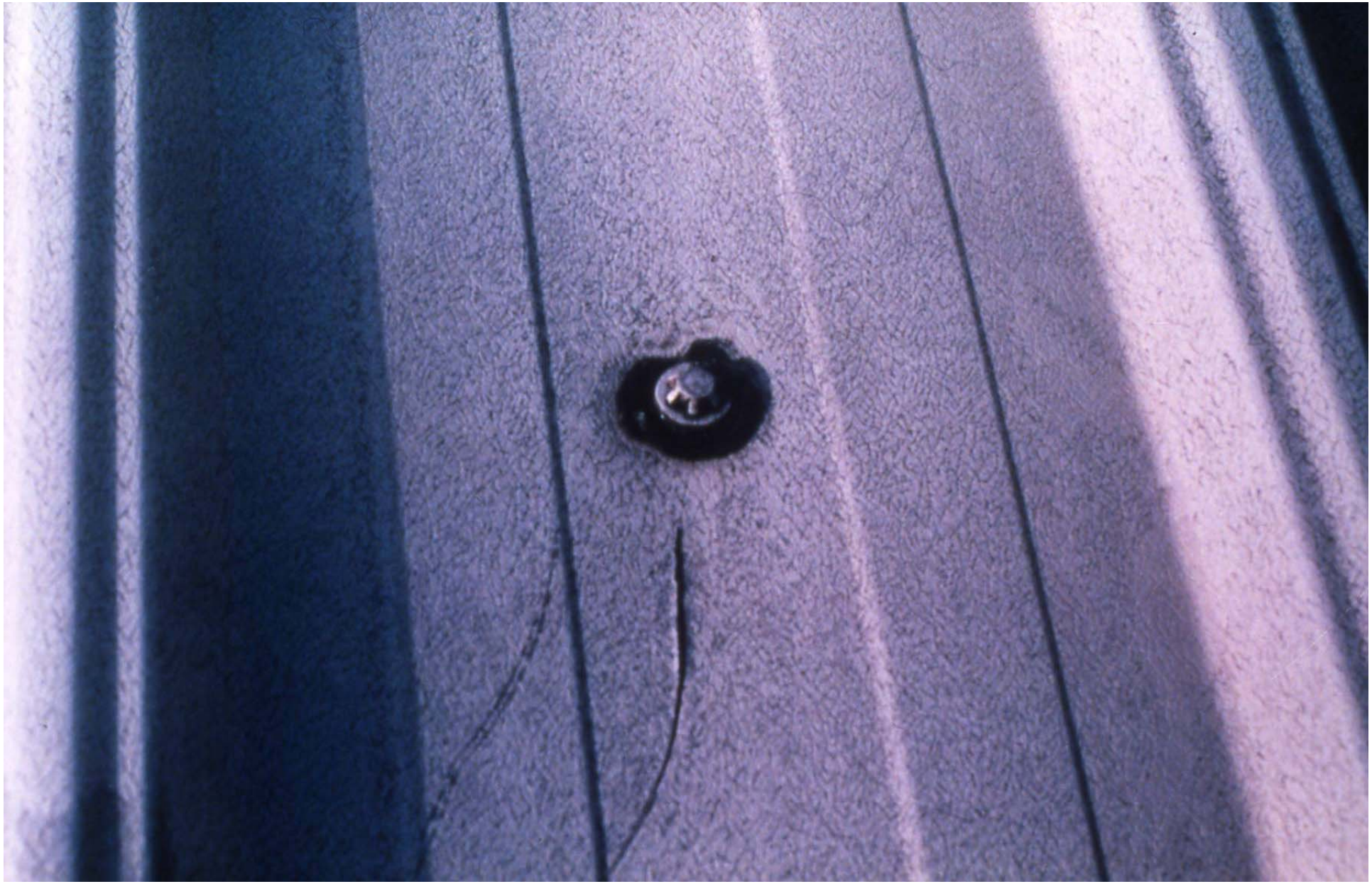
Interior Steelwork

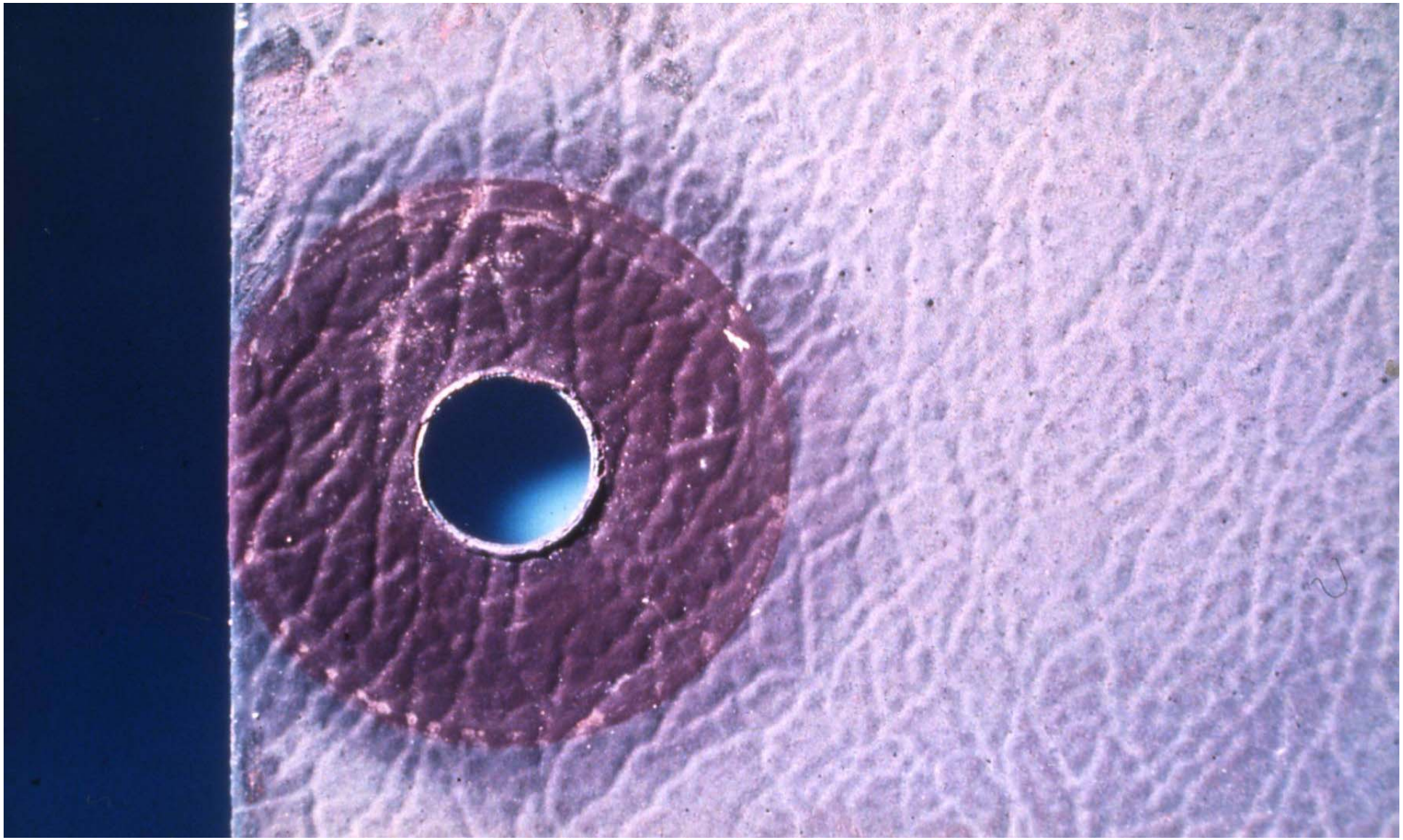
Nottingham Post Office - 1893

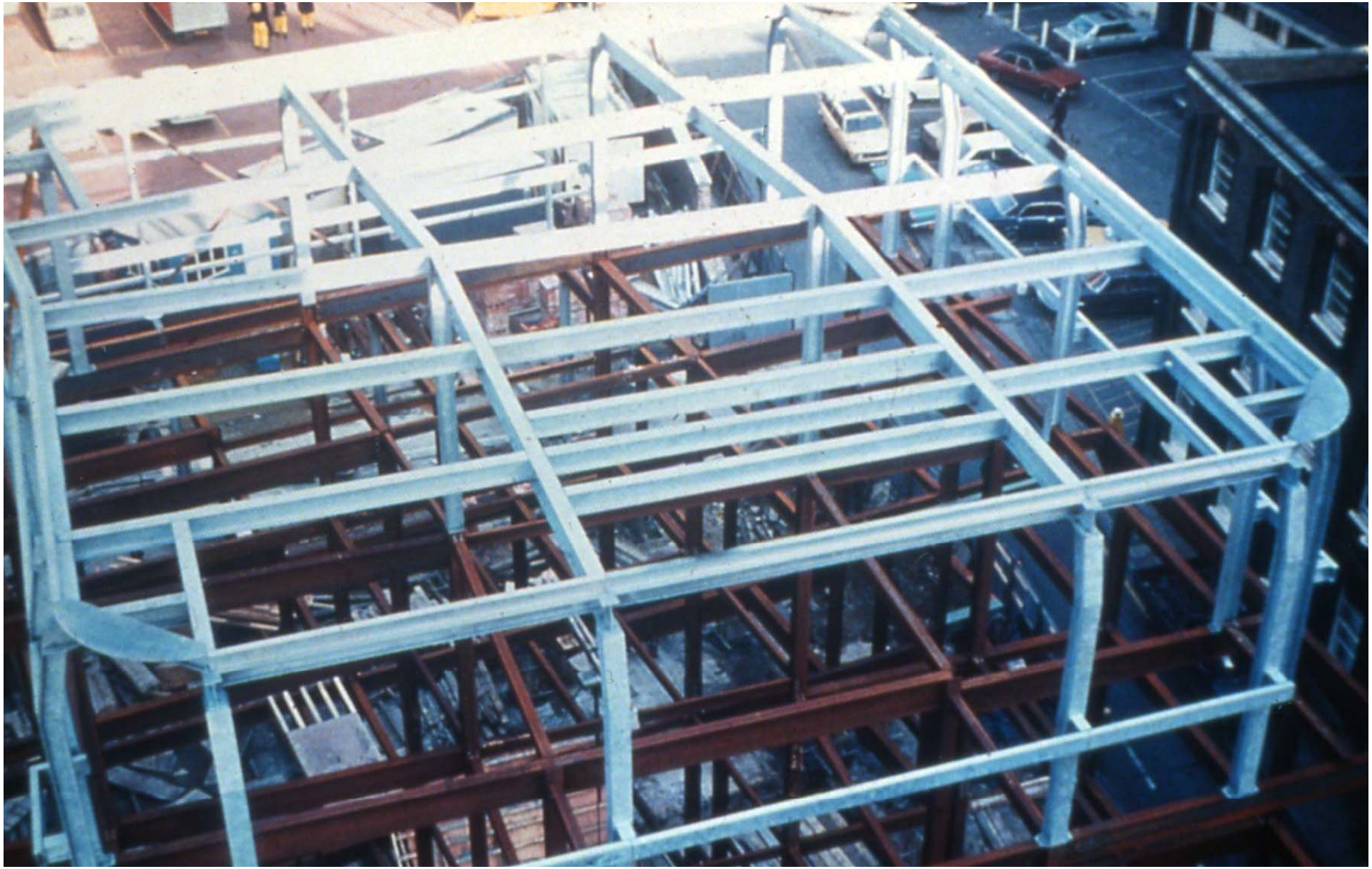




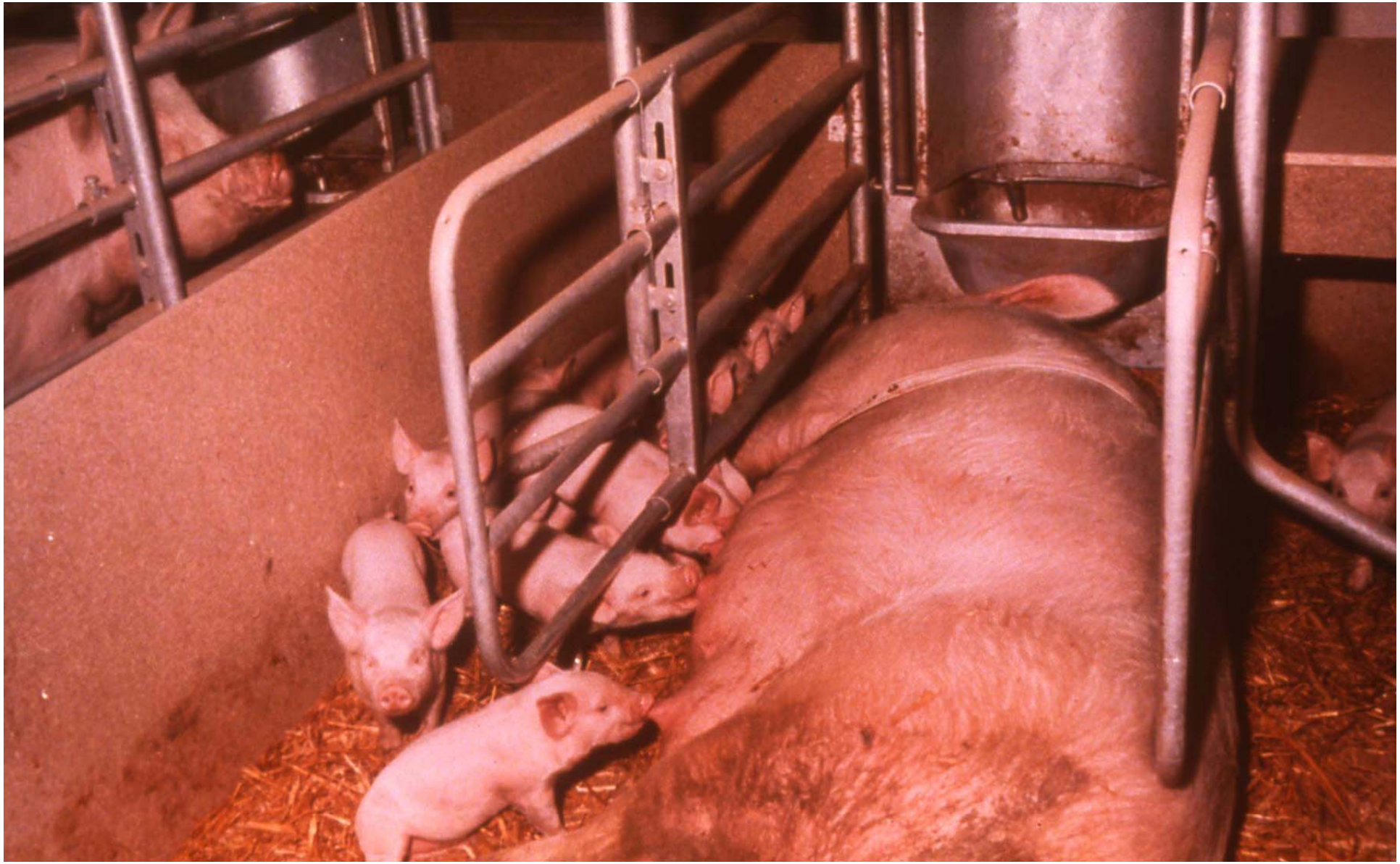


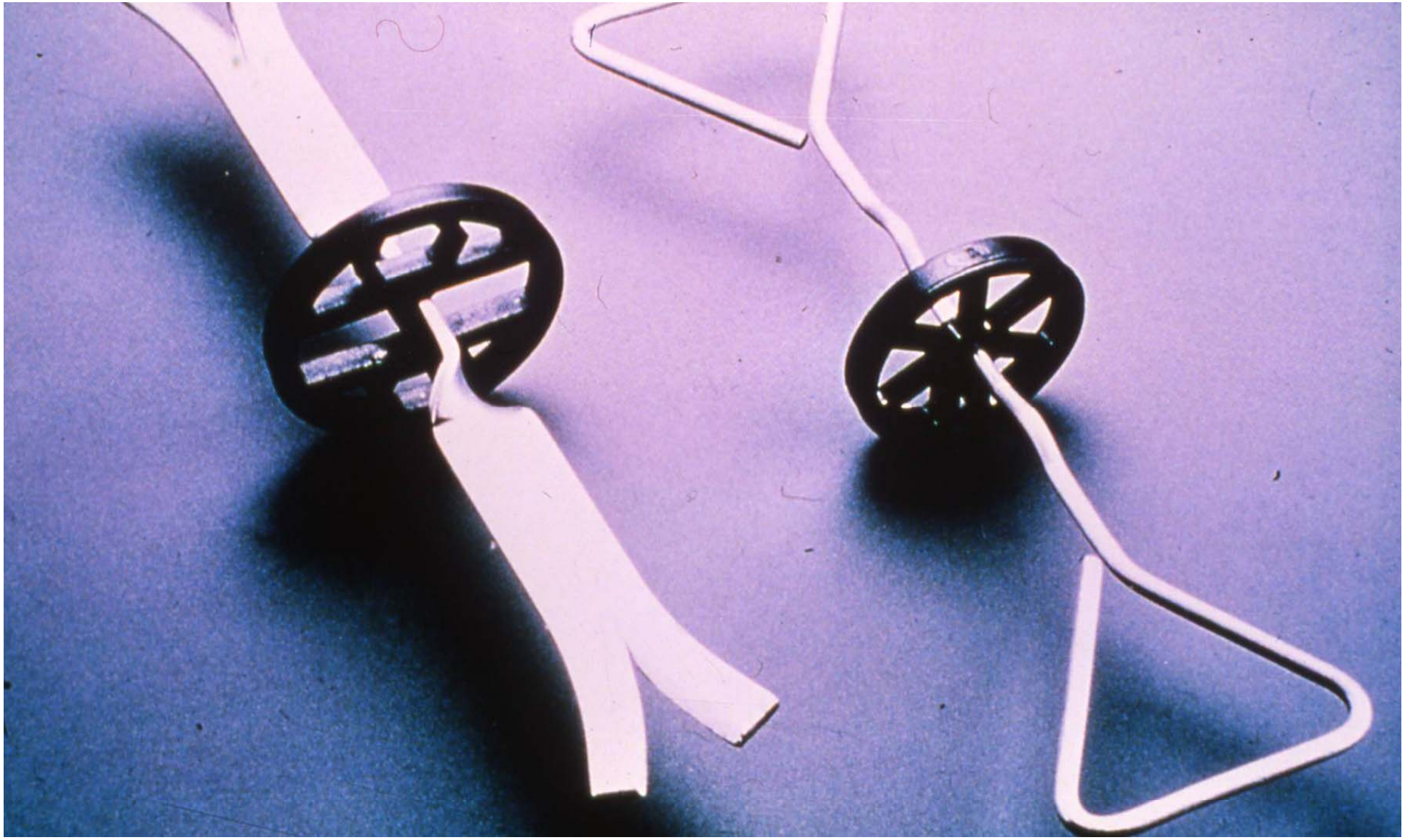


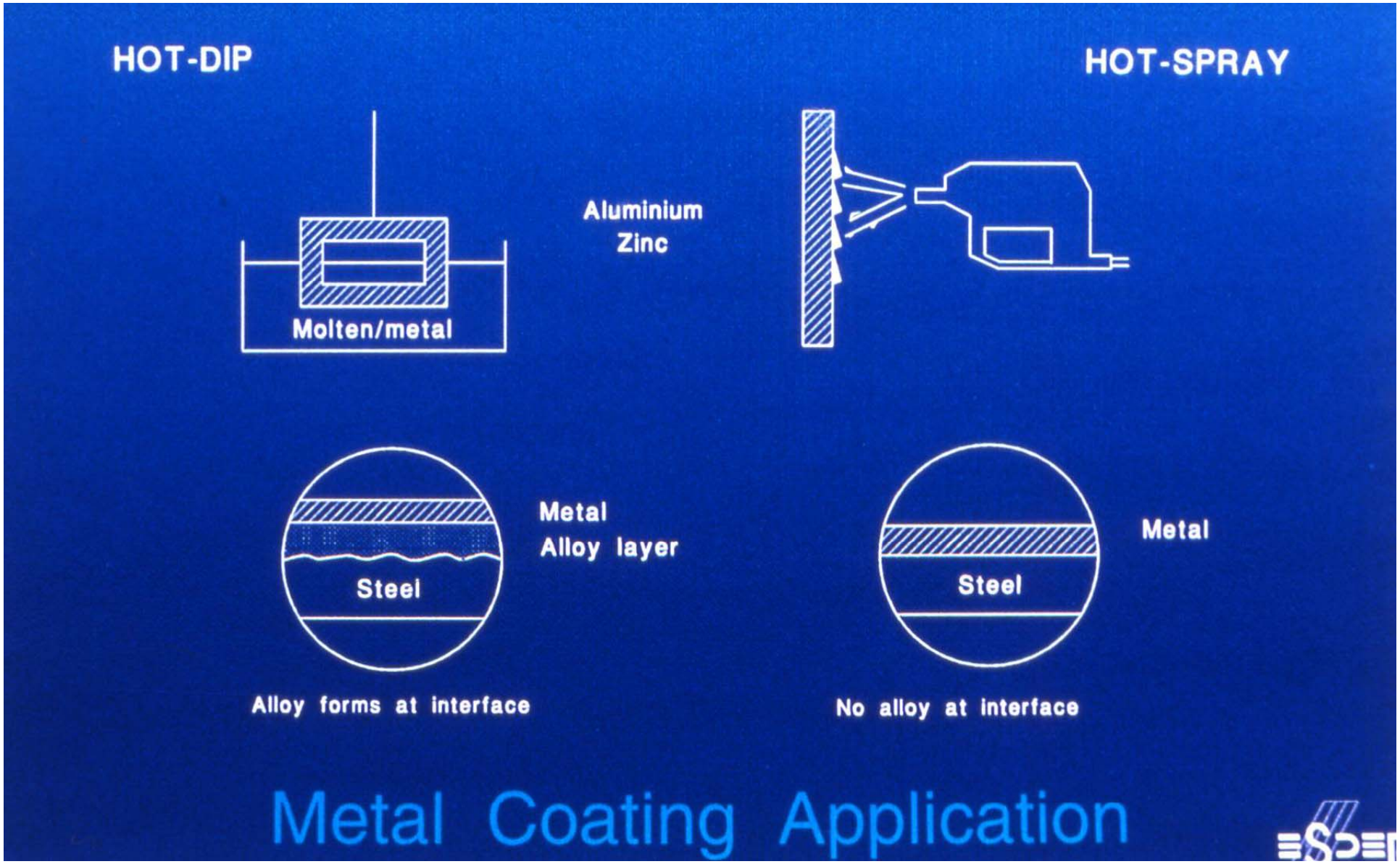




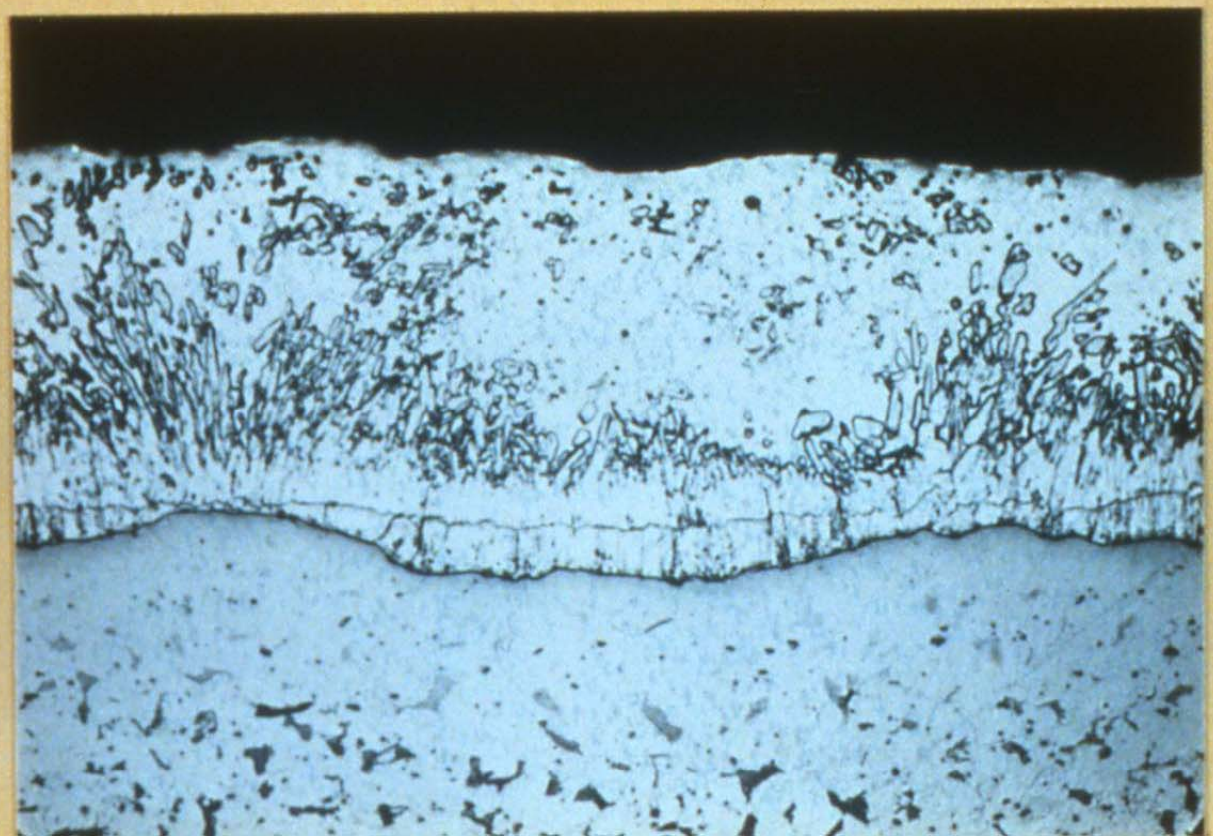

S.S.C.CO
UX-OASR
914X305X224
L/C-8/79/90343
BAGHDAD-IRAQ
4T.81
914-305-224
L/C/8/79/90343
4T.81
BAGHDAD-IRAQ-UK OASR
MADE IN U.K
4T.81
S.S.C.CO
UX-OASR
914X305X224
L/C-8/79/90343
BAGHDAD-IRAQ
4T.81
914X305X224
BAGHDAD-IRAQ

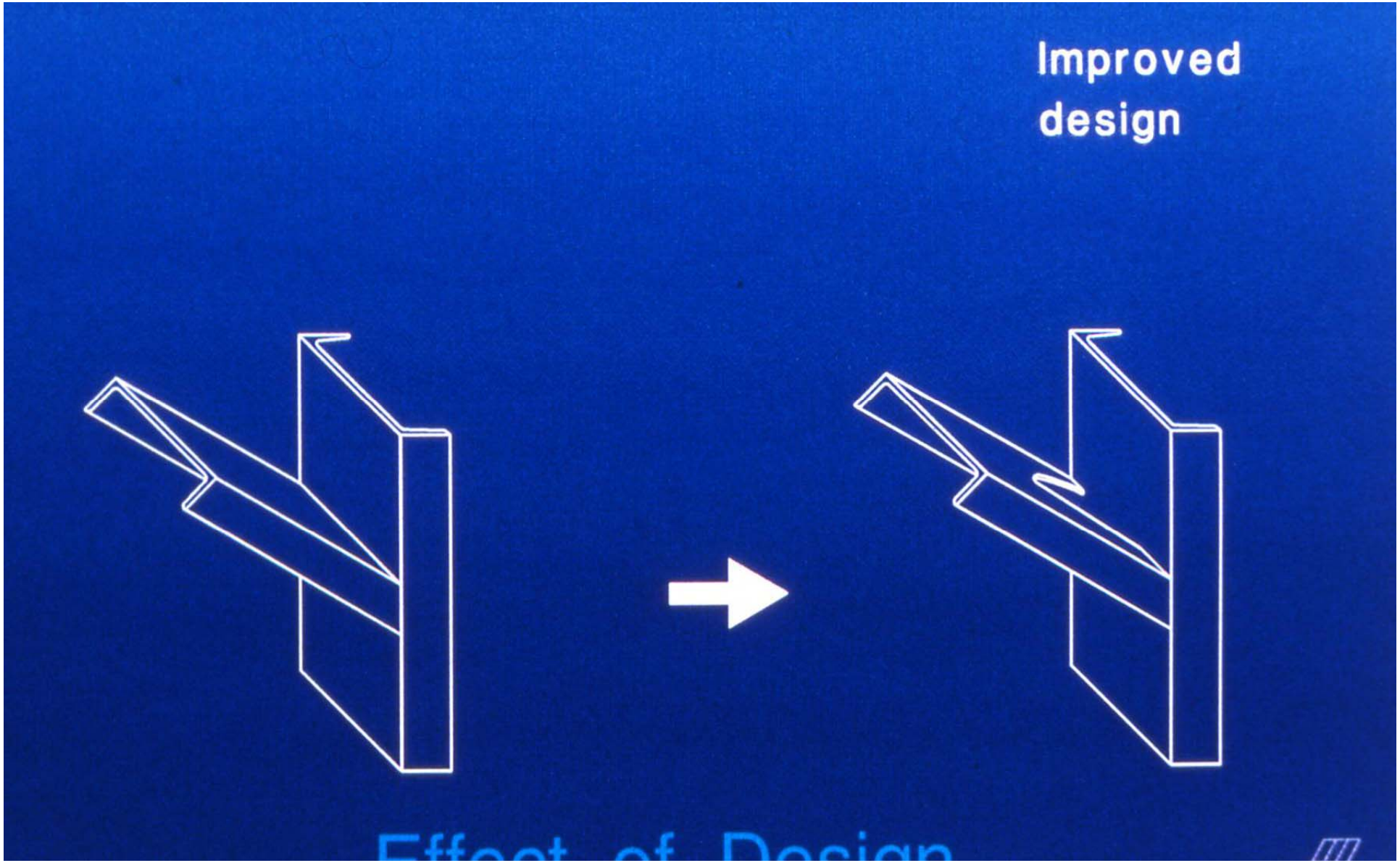


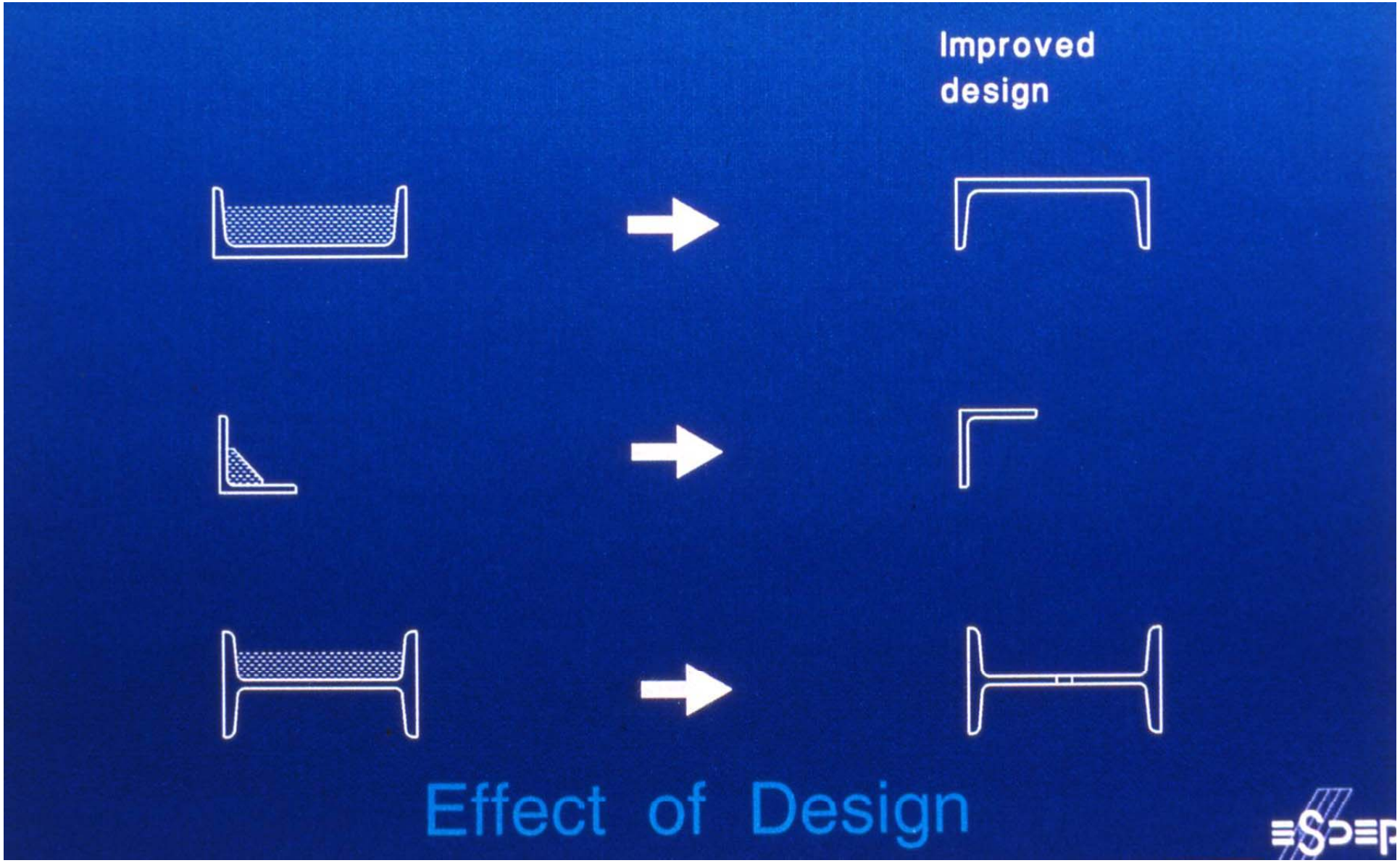


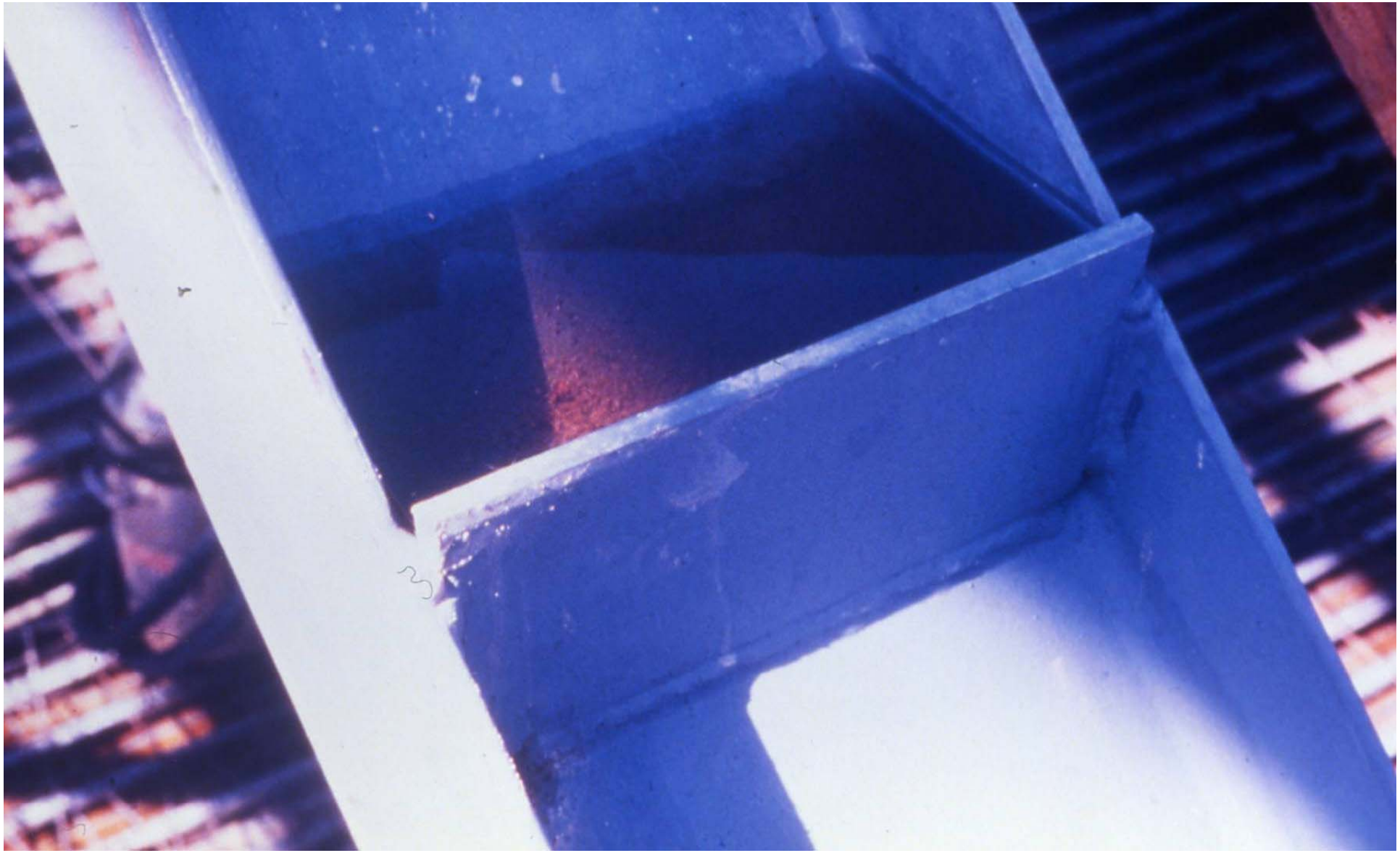

HOT-DIP
HOT-SPRAY
Molten/metal
Aluminium
Zinc
Steel
Metal
Alloy layer
Alloy forms at interface
Steel
Metal
No alloy at interface
Metal Coating Application

GALVANIZED STEEL

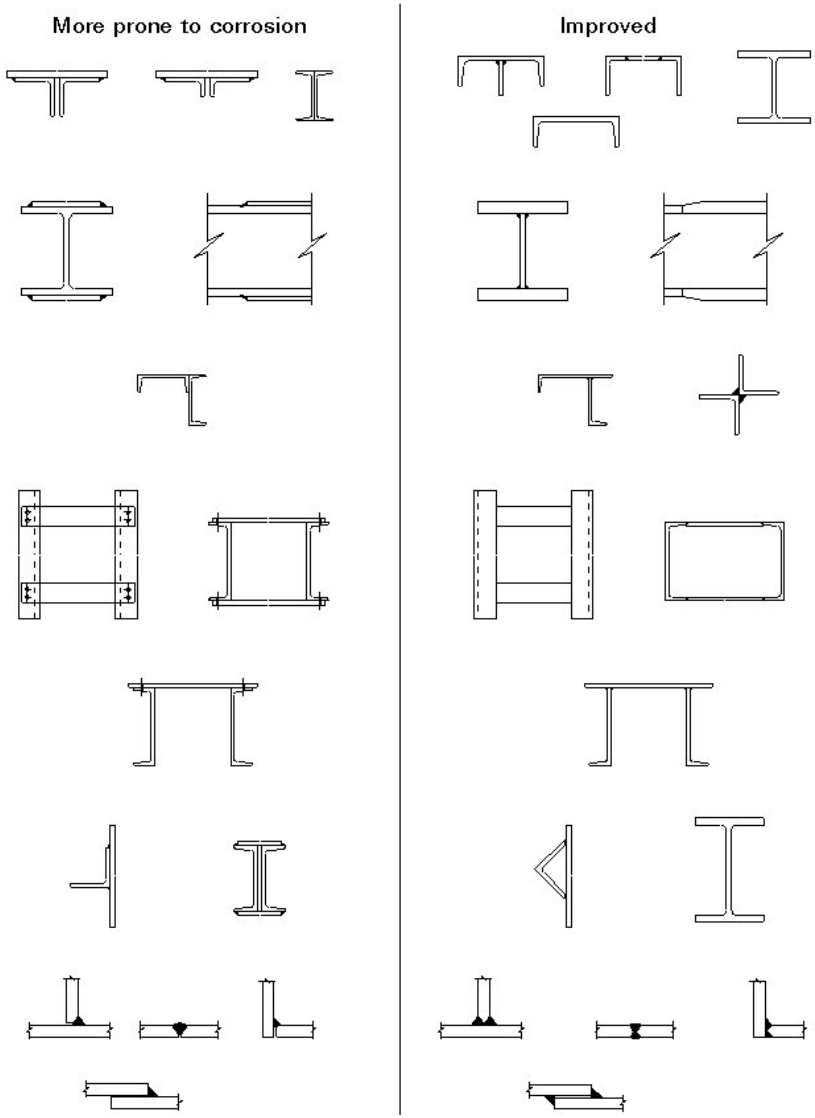



Improved
design
Effect of Design

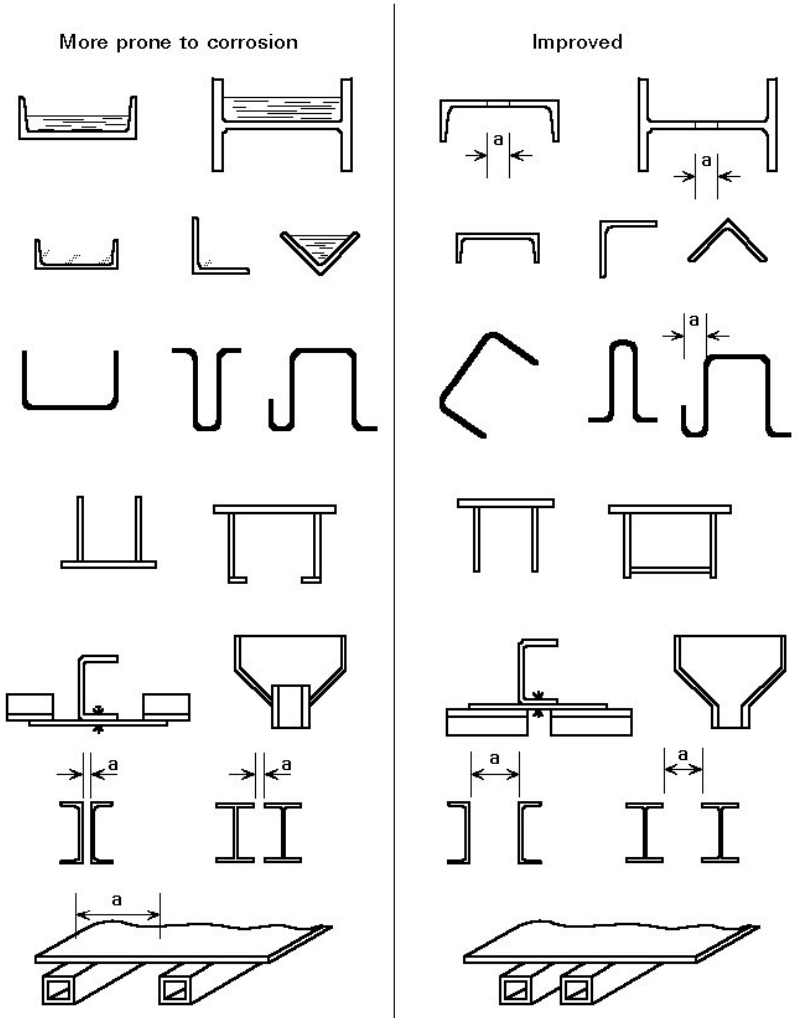

Improved
design
Effect of Design



Prerezi, ki omogočajo enostavno barvanje in vzdrževanje



Nevarnosti zadrževanja vode in nabiranja prahu v profilih.

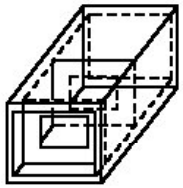


Ukrepi:

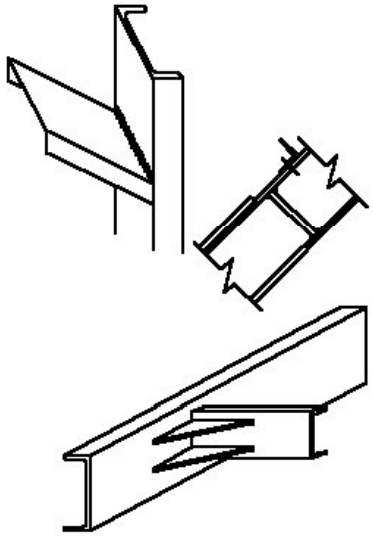
Izvedba drenažnih lukenj in odprtin (a > 30 mm).

Preprečevanje nabiranja vode, umazanije in rje na površini in na mestih stikovanja elementov

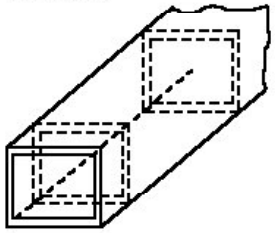
More prone to corrosion



Open

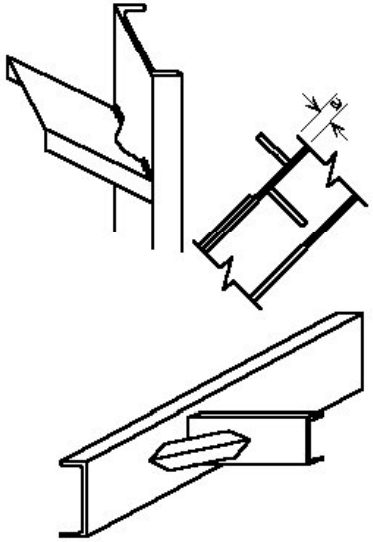


Improved



Hermetic welded

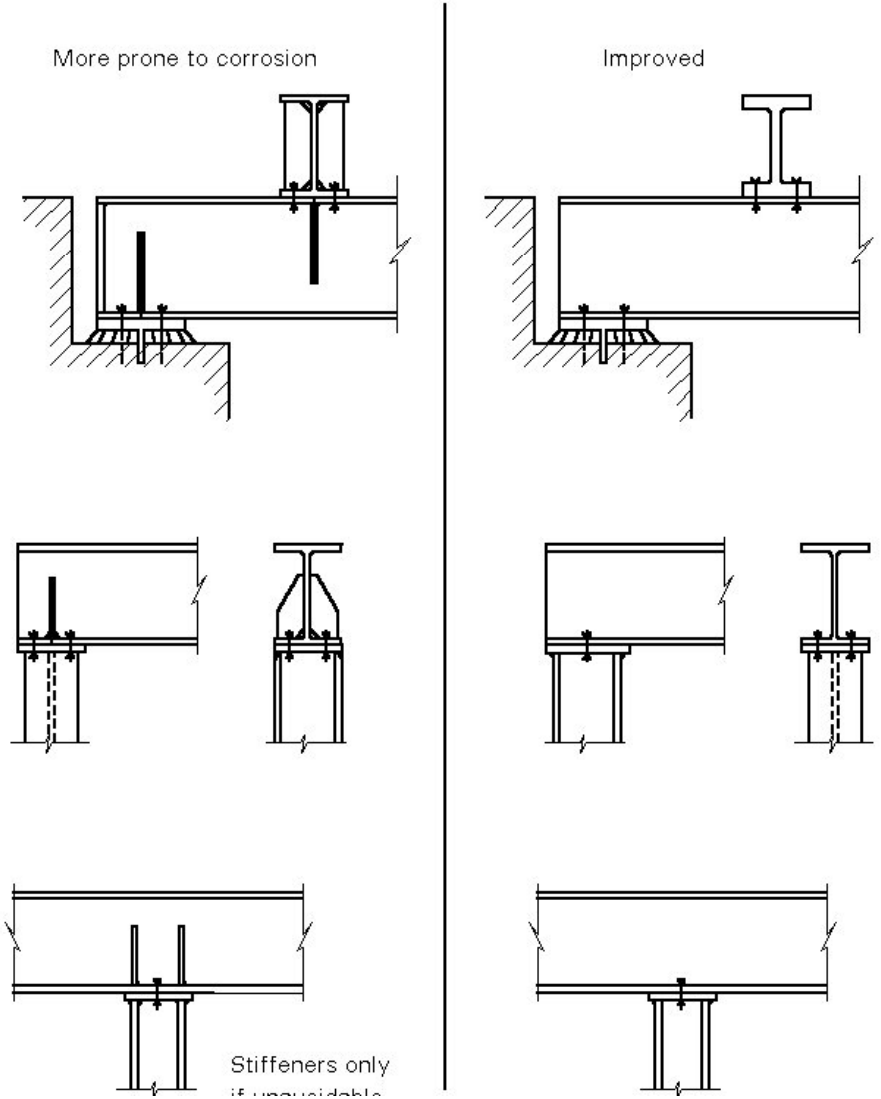
Attention for pressure fluctuations on walls due to
- changes in temperature
- changes in barometric pressure
- consumption of oxygen through rust formation



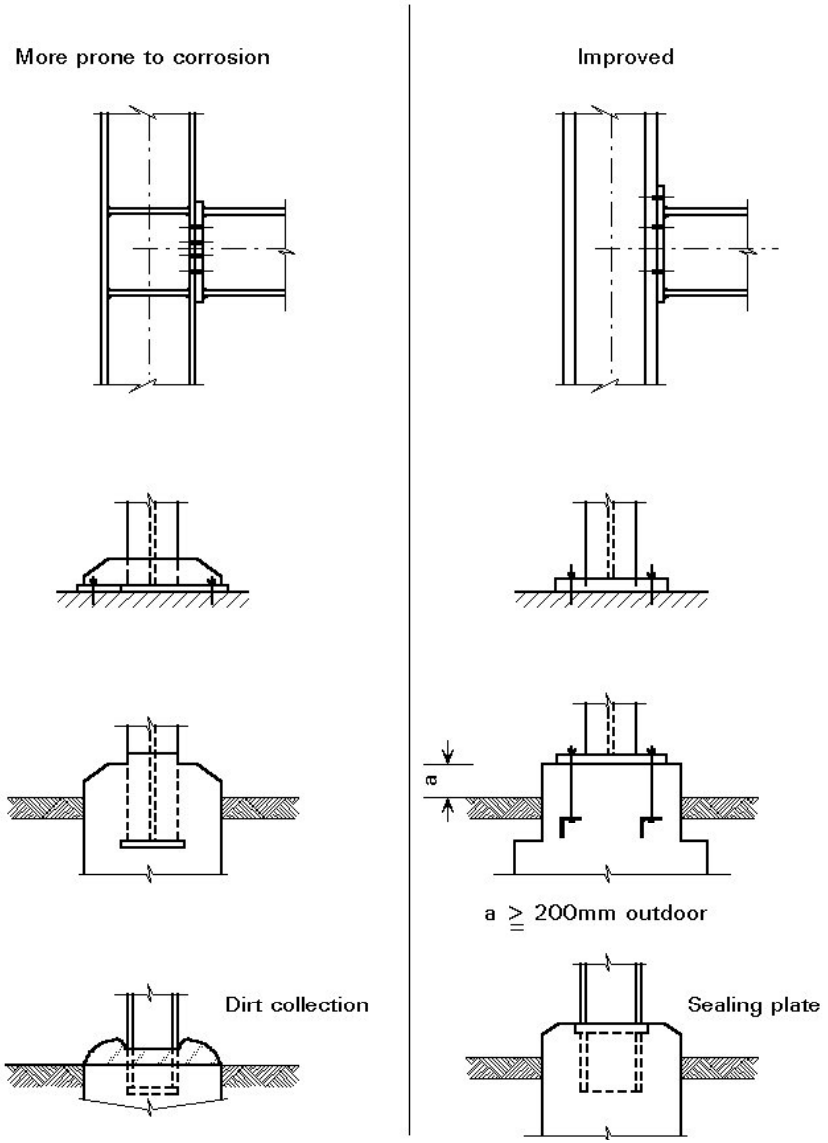
Ukrepi:

Hermetično zapiranje votlih prerezov, drenažne luknje med stikovanimi element in ojačitvami.

Oblikovanje detajlov brez ojačitev, ki predstavljajo mesta za zadrževanje vode in nabiranja prahu



Primeri dobre prakse



Preprečitev korozije z ukrivljenimi robovi

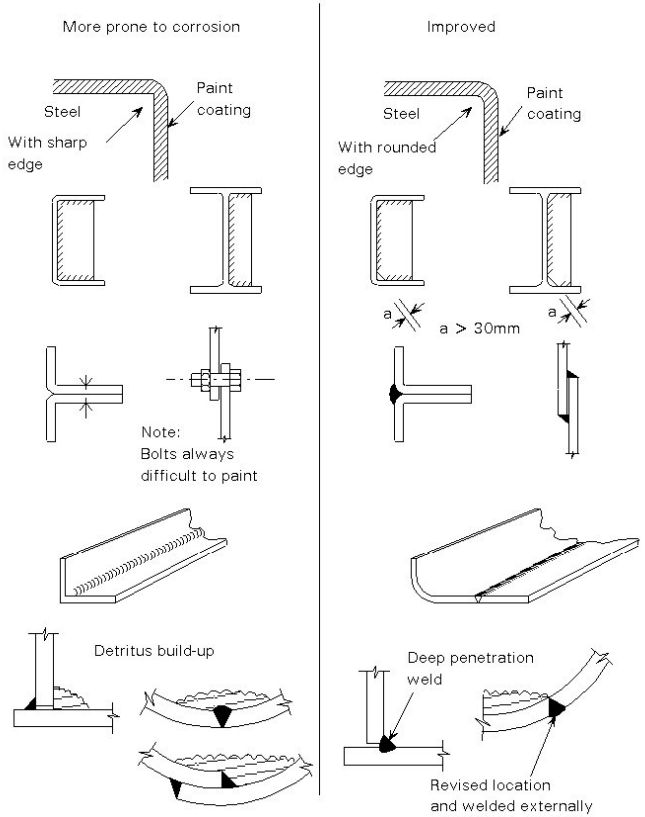


Figure 6 Structures with rounded angles to avoid corrosion. Edges and corners are corrosion sensitive points even when protected by coatings

Robovi in vogali so občutljivi na korozijo tudi v primeru protikorozijske zaščite.

Površine primerne za barvanje in za pregledovanje – primeri dobre prakse

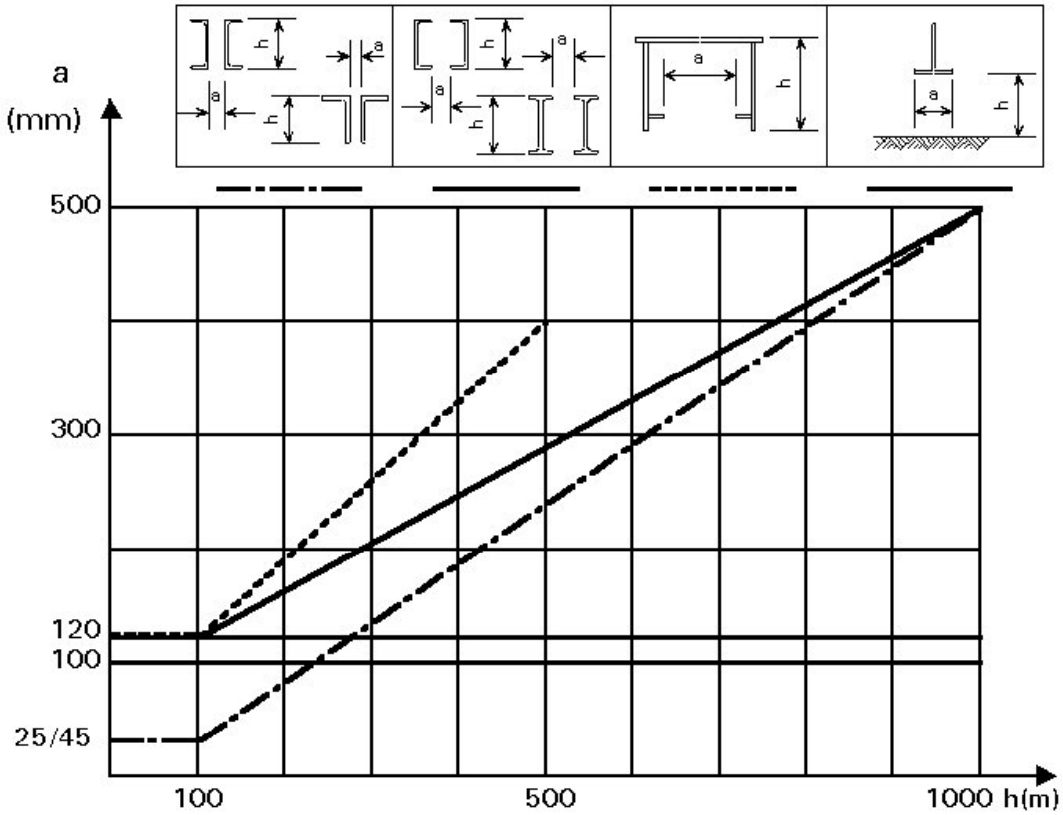
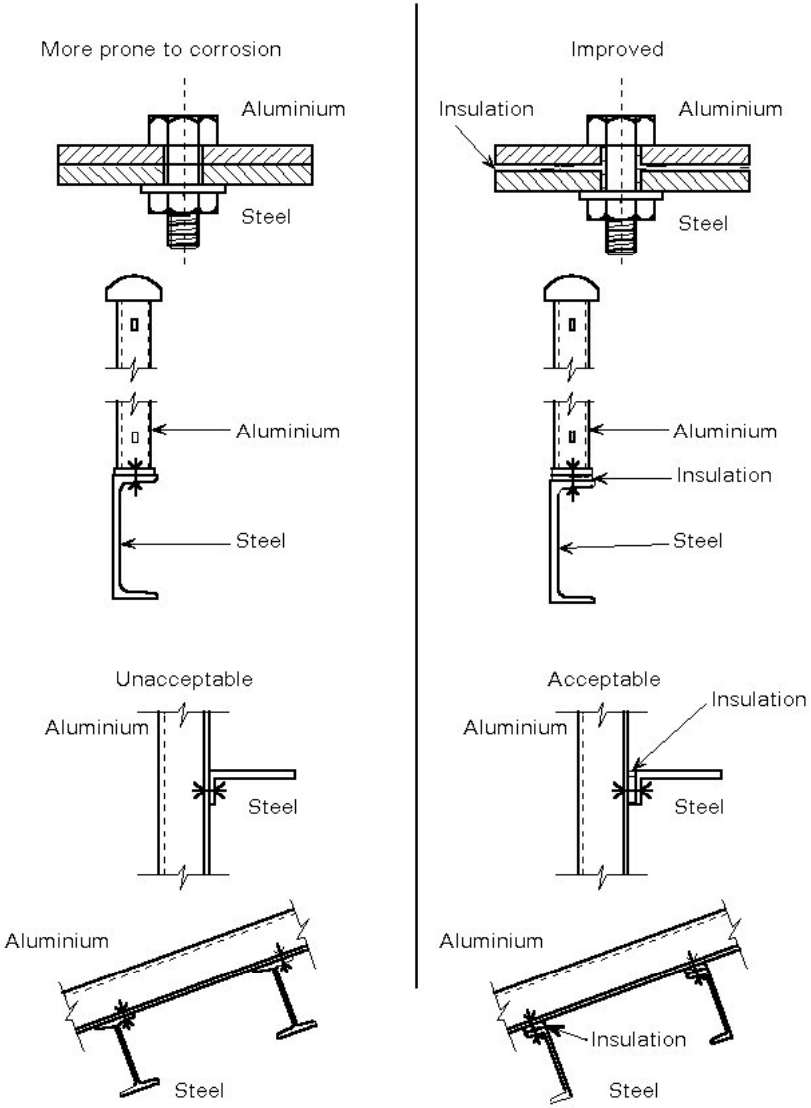
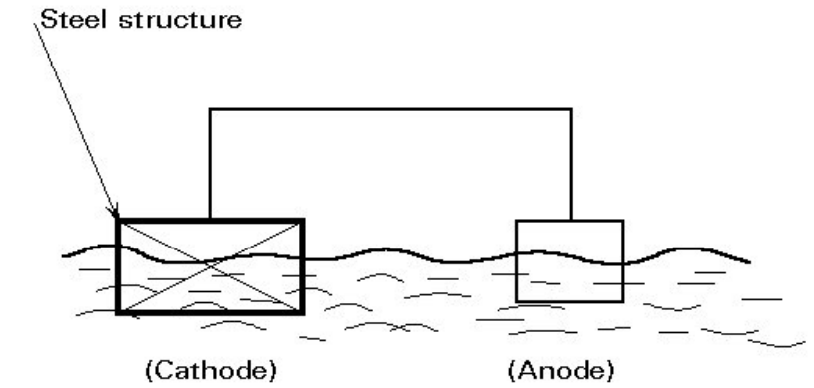


Figure 7 Examples of good design for coating and control of surfaces

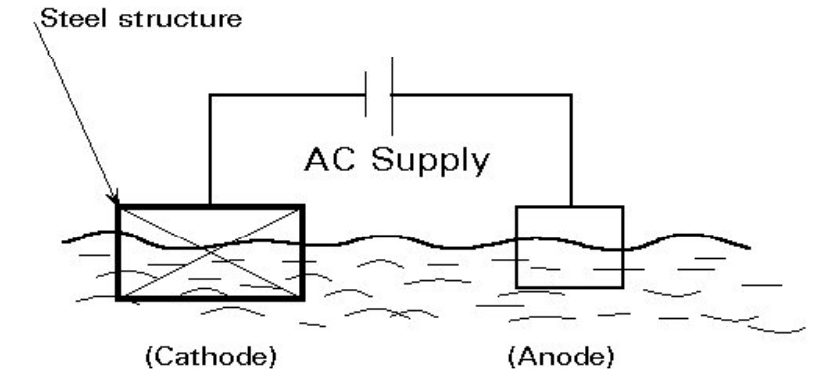
Preprečevanje korozije zaradi galvanskega člena z izolacijskim materialom



Jeklene konstrukcije v vodi – katodna zaščita

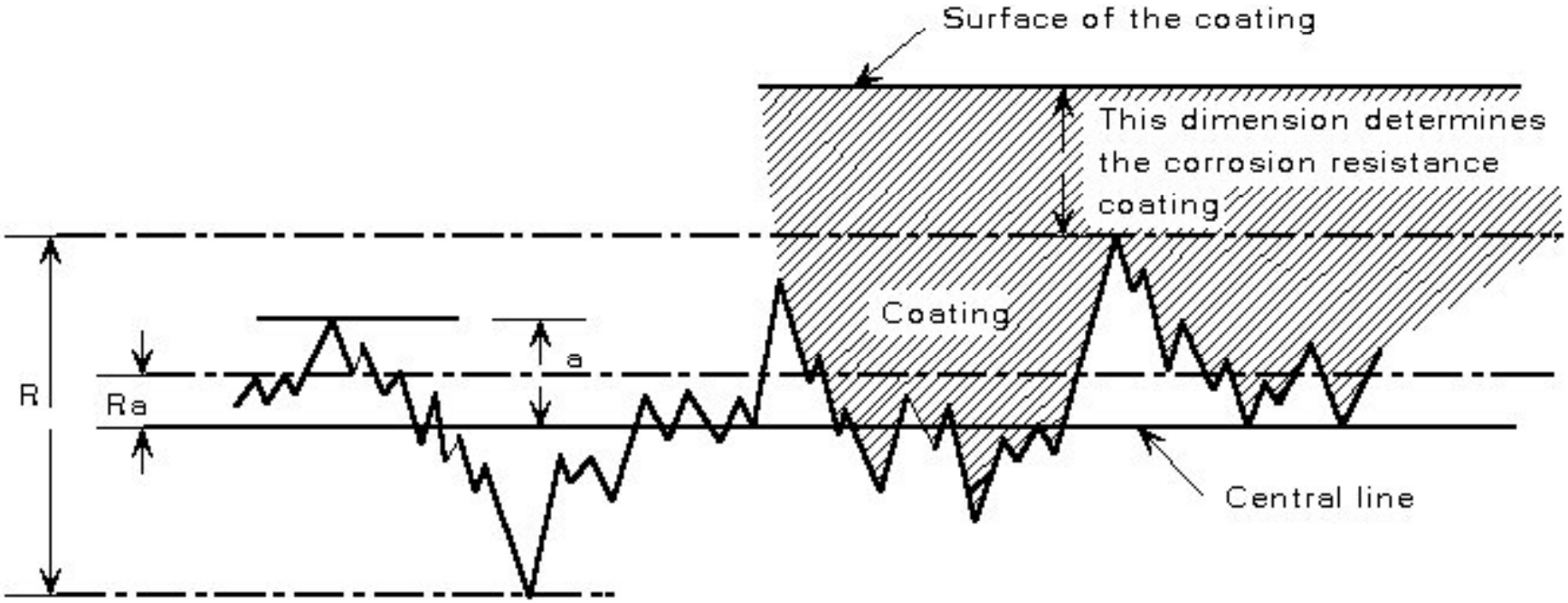


Cathodic protection using sacrificial or galvanic anode



Cathodic protection using impressed current system

Vpliv hrapavosti površine na učinkovitost protikorozijskega premaza



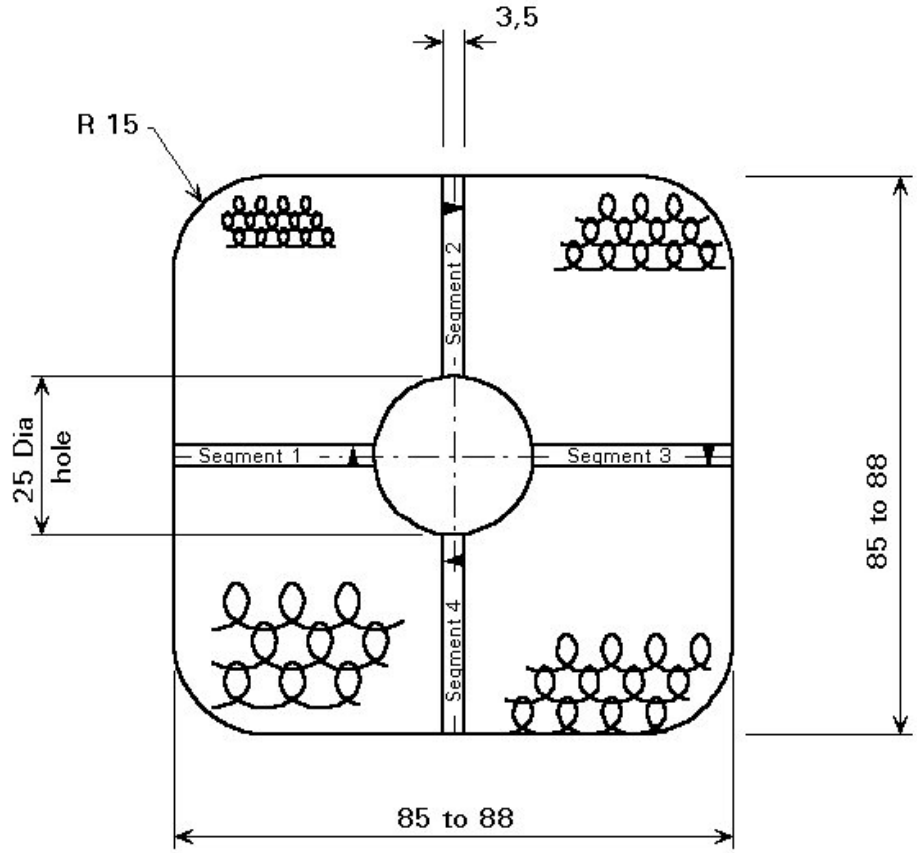
R is the maximum 'peak-valley' roughness of the steel surface

R = distance of maximum peak to deepest valley

Ra is the average roughness

$$Ra = \frac{l(a)}{n} = \text{average distance of central line}$$

Meritve hrapavosti površine



The comparator is placed over the steel surface to view either the shot or grit blasted face as appropriate to the method used to clean the steelwork.

If the surfaces visually fall between :

1 and 2 it is classified as "fine"

2 and 3 it is classified as "medium"

3 and 4 it is classified as "coarse"