- MATERIAL PREPARATION

Preparation of the structure for hot-dip galvanizing is carried out in accordance with the SRPS EN ISO 14713-2 standard and includes the following:

1. Surface condition of the structure and elements for hot-dip galvanizing

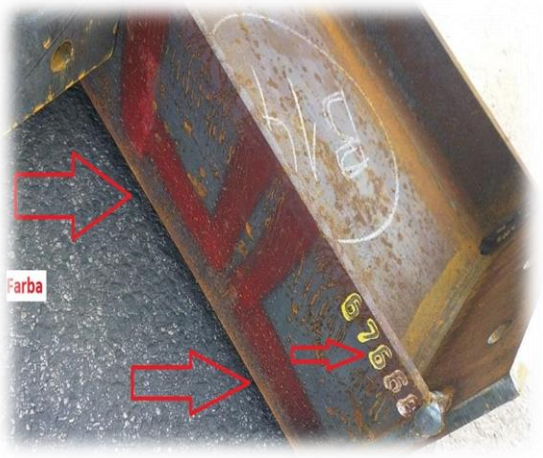
The surface must be free of:

- paint, varnishes, colored markings,

- non-removable greases and oils (highly persistent mineral oils, fats, oils, and greases that are difficult to emulsify),

- welding sprays, paraffin, tar, and residues of previous surface protections,

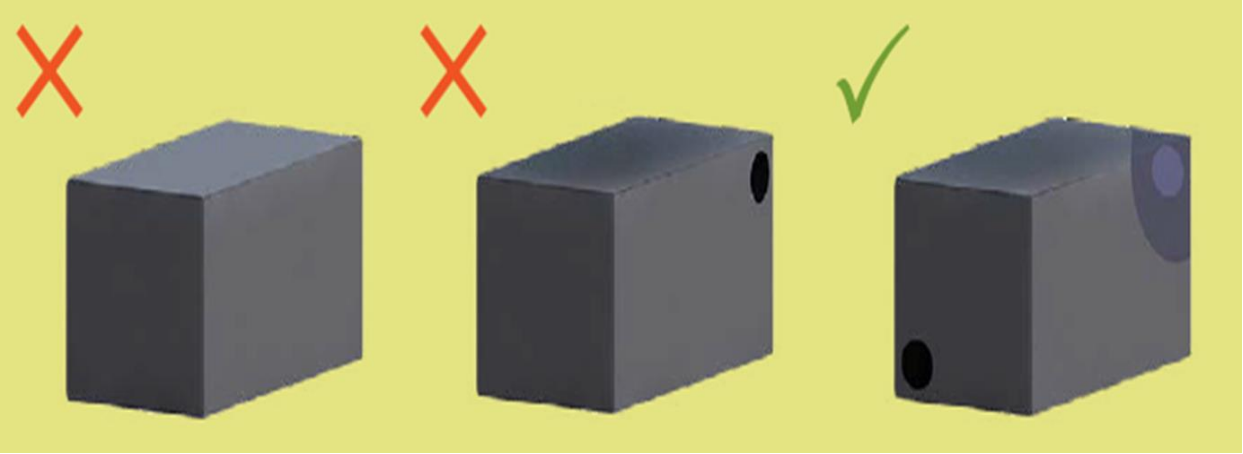
- inside pipes and corners of the structure, no residues should remain after sandblasting (steel beads, dust).



2. Types, positions, and sizes of technological openings

Each element or structure must have appropriate technological openings (drilled, cut, etc.) whose functions are:

A. Zinc entry and air exit from closed pipes and corners.



Closed pipe

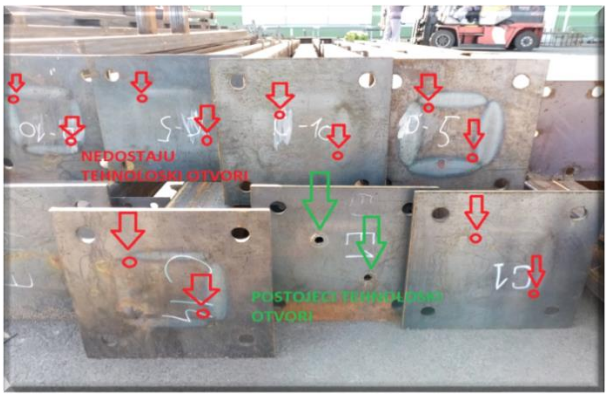
Rapid heating of the internal air to 450°C leads to an explosion

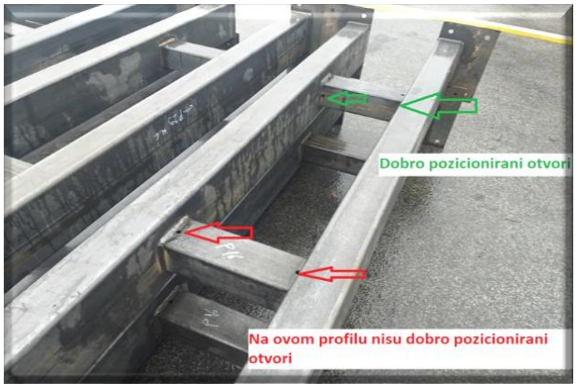
One opening

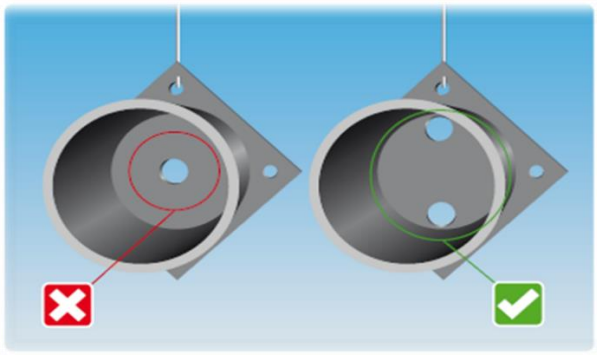
An outlet for heated air, but the pipe floats on the surface of the zinc cattle

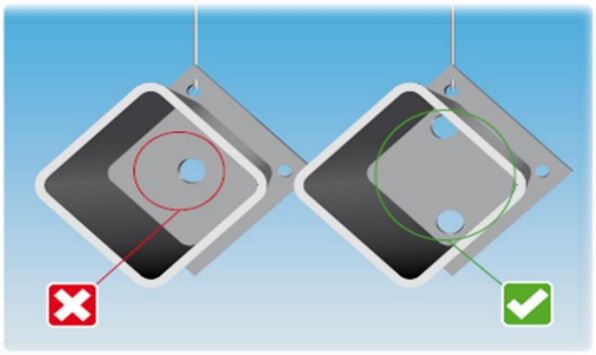
Two openings

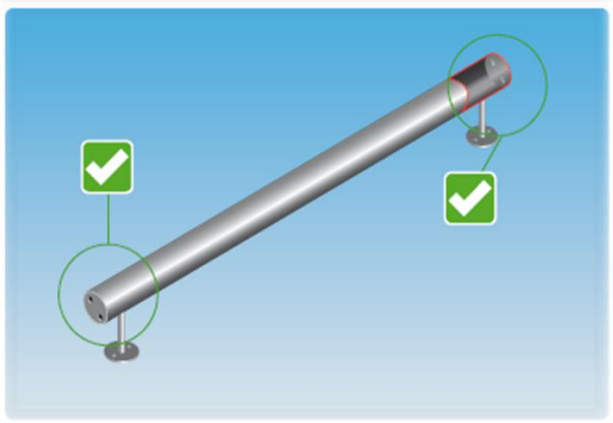
Allows the pipe to have an inlet for zinc and an outlet for heated air, and to be hot-dip galvanized both inside and outside

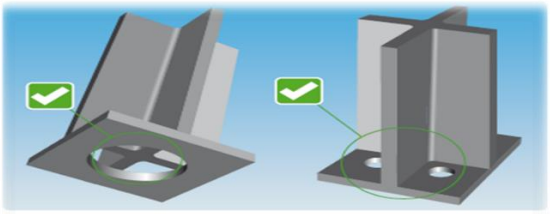


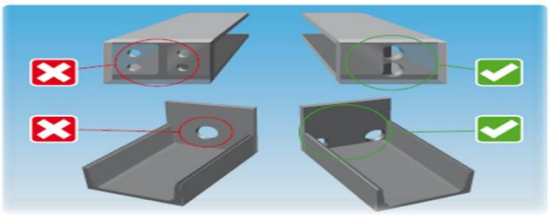












B. Hanging

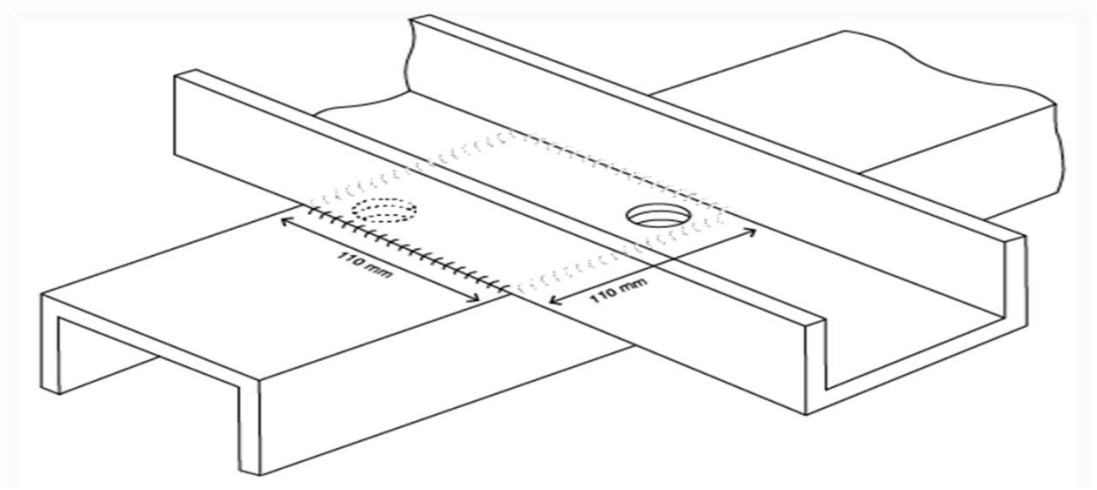
The position of hanging openings must comply with SRPS EN ISO 14713-2

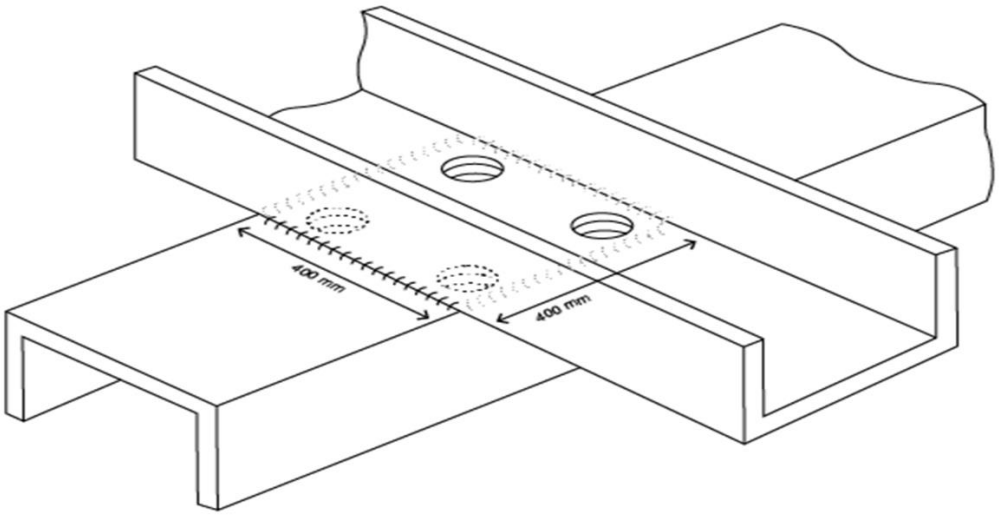
- Hanging openings must be at least 8 mm in diameter.
- The structure can also be hung on specially welded parts (loops).
- For simple elements up to 3200 mm in length, one hanging point is sufficient, at least 20 mm from the edge.
- For structures and elements longer than 3200 mm, two or more hanging points are required.

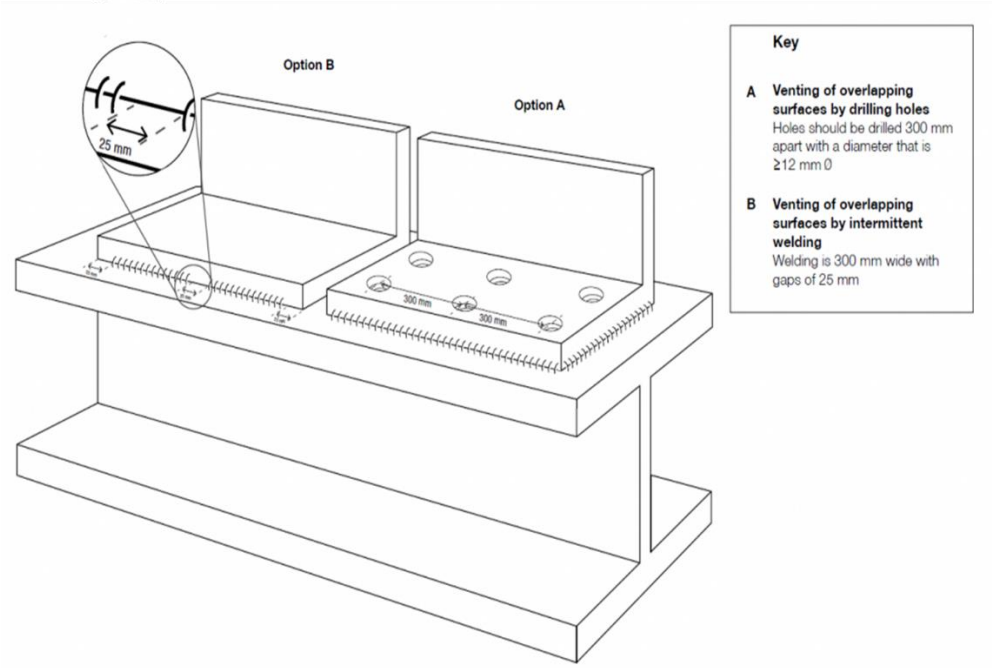
- Hanging of elements should be done at an angle of 30° - 45° or vertically (if dimensions allow), ensuring unobstructed entry of the zinc bath, escape of hot air, better zinc drainage, and easy removal.

C. Ventilation

It is necessary to create ventilation holes in closed surfaces between two plates that are fully welded together to prevent explosions during galvanizing, if the overlapping surface exceeds 100 mm x 100 mm or 10,000 mm². The hole can be on just one plate or through both.

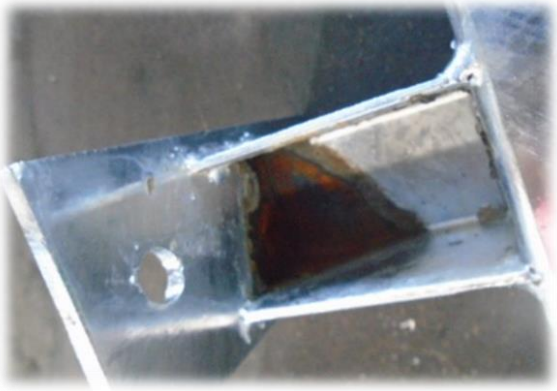





Option B
Option A
25 mm
300 mm
300 mm
Key
A Venting of overlapping surfaces by drilling holes
Holes should be drilled 300 mm apart with a diameter that is ≥12 mm Ø
B Venting of overlapping surfaces by intermittent welding
Welding is 300 mm wide with gaps of 25 mm


NEOPHODNI
TEHNOLOŠKI OTVORI

❖ ***Consequences of improperly positioned technological openings:***



More on element preparation:

- Material selection instructions
- General and technical conditions for hot-dip galvanizing
- A small handbook for element preparation