

Waterproofing roofing: evolution, classification, certification and the main lines for a right project

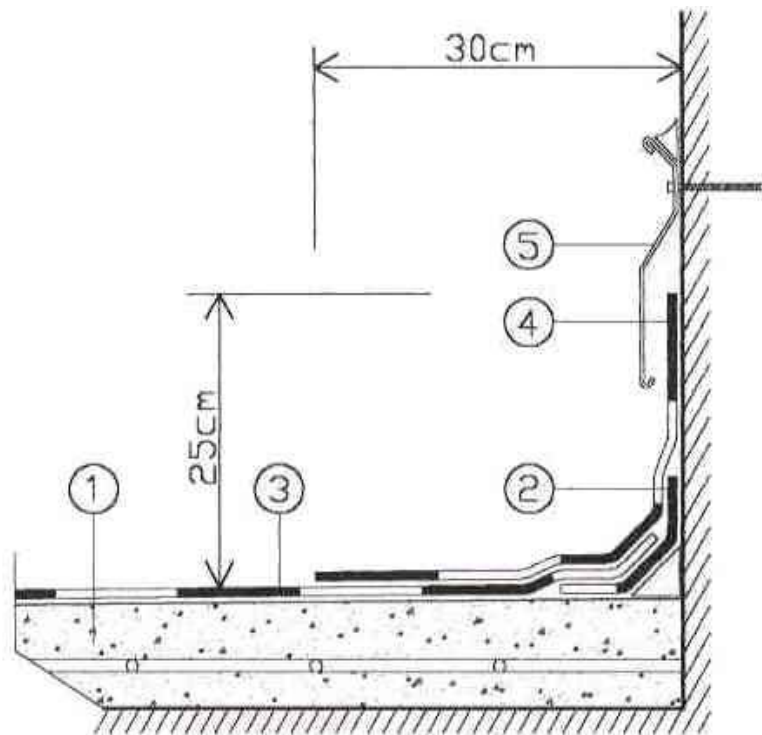
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Waterproofing works have always had a fundamental role in the building sector. Their lack or their wrong execution develops into a fast damage of the building structure after water's infiltration.

The importance of this kind of works, implemented since ages, has been underlined once again by recent screening, according to these studies, in the western countries, the 80% of the civil and industrial building's degradation is caused by waterproofing fault.



The Egyptians were the first ones to use this kind of system basing them on flag stones. Since that time, waterproofing products and techniques have been improved and refined more and more, increasing speed, duration and decreasing costs.

Depending on layout and disposition of surface, system and materials can differ each other a lot. Together with filled asphalt on site and multy coat system, less and less used, modern waterproofing sheets became the most spread waterproofing system

but also the one giving the best results in the medium and long run. These waterproofing systems are completely compliant with modern architectural frame, light and elastic. They can better flavour movements of the structure and distortion of buildings, without showing particular problems after several solicitations.

Waterproofing sheets are placed in Italy more than in any other countries. In Italy the bituminous waterproofing sheets have the 90% of the market. This fact does not surprise us if we consider that these products, and the technology necessary to produce them, born in Italy. A particular sheet's family, which belongs to the last generation and it is composed by poliolefine, gives excellent work done. Because of its recent appearance an objective judgement will be given only after some years, when the yard's results will be available together with the laboratory ones.

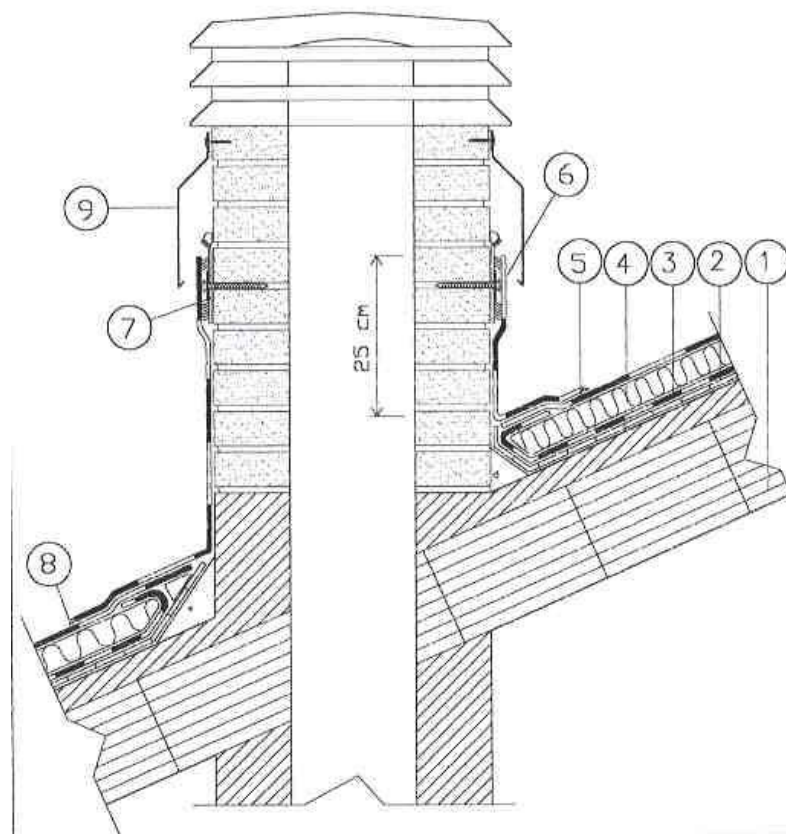


FIG. 2 : RACCORDO FALDA - CAMINO

1. SUPPORTO IN CLS ARMATO E LATERIZIO ; 2. STRATO DI REGOLARIZZAZIONE IN NT DI POLIPROPILENE ; 3. SCHERMO AL VAPORE IN FILM DI POLIETILENE ; 4. ELEMENTO TERMOISOLANTE IN PANNELLI DI POLIURETANO ; 5. ELEMENTO DI TENUTA SINTETICO IN PVC CON FACCIA INFERIORE IN NT ; 6. ELEMENTO DI TENUTA RISVOLTATO SUL CAMINO ; 7. PROFILO DI BLOCCAGGIO METALLICO RIVESTITO IN PVC ; 8. CORDOLO IN PASTA DI PVC PER SIGILLATURA ; 8. SCOSSALINA DI PROTEZIONE IN LAMIERA DI ACCIAIO INOSSIDABILE.

The overview of waterproofing products can concludes with the liquid and doughy ones, able to produce a waterproofing sheet directly on site. These products have not

achieved a great success, in our country, because they do not permit to obtain uniform thickness layers. So they are used for usual self made works.

No matter which product is used, the aim is to employ a material which is not only waterproof and insoluble, but also that maintains these characteristics under mechanical solicitation and physical - chemical reactions for a considerable period of time.

Notwithstanding what have been said before, building waterproofing has not been considered as much as it should.

Actually waterproofing system is one of the most discussed issues in the building sector. The waterproofing system must born and develop inside the project of the building. Particularly attention must be paid to the situations which require a more detailed work during the waterproofing job itself, like: joints, emerging structures (pipes, chimneys), edges, etc, because they are the cause of the problems (pictures 1-2-3).

The most critical factor (maybe even more then the used product itself) in order to perform a correct waterproofing system is the implementation on site, that means that it have to be done by specialised professionals.

Although, often waterproofing system are not projected and their functionality is committed to the worker during the final phase. For this reason, waterproofing products must be reliable and their quality must be warranted by the producers and certificated by "Technical Agreements".

Using these "Technical Agreements", Official National Institutes permit producers to achieve total quality products actually demand on the market.

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