

## Installation of SMARTape

The preferred way of installation of SMARTapes is gluing.

The clamping of the SMARTapes is less favorable due to:

- A) SMARTapes are to be prestressed during the installation which can be slow and very risky operation in the conditions found on-site
- B) Special stainless steel clamps are to be fabricated which increases the cost of equipment
- C) Each clamp is to be fastened using pre-installed bolts; cost is increased and installation time is extended
- D) After the installation is completed all the SMARTapes are to be protected over all the length using metallic or hard plastic profiles which is costly, risky and time consuming operation
- E) Regarding the points A) to D) the clamping procedure is (i) risky, (ii) more expensive and (iii) slower (time consuming) and therefore is not recommended for the project

The gluing necessities (a) glue, (b) tools for gluing ("guns" or "syringes"), (c) accessory scotch tape, (d) other. The gluing procedure (Figures 2a to 2e) proposed in the project is to be performed as follows:

- 1) Clean the surface of which the SMARTape is to be installed (gluing on rusted or painted surface may involve partial or full delamination of the tapes and the transfer of strain from the monitored structure to the SMARTape can be compromised)
- 2) Unwind wished accessory scotch tape, put it straight with sticking part on the top
- 3) Lay the SMARTape onto the sticking part of the scotch
- 4) Put and spread the glue onto the SMARTape
- 5) Fix the SMARTape onto the structure; the scotch will provide for keeping the SMARTape at the good position until the glue hardens (6 hours)

