

2. The connector shall be capable of transferring all the forces in the reinforcement and the properties of the connected reinforcement shall correspond as closely as possible to those of the original reinforcement.

9.3.5.4 Provision for Extra Reinforcement Using Welding

1. Site welding of reinforcement shall be avoided if alternative methods of repair are available.
2. If site welding is to be carried out the following essential features shall be included in the programme of work:
 - a. The relevant standard shall be applied.
 - b. A written procedure shall be agreed before work commences, covering method, type of welding, competencies, sampling and testing.
 - c. Qualification tests to certify all welders shall be carried out both before the beginning of the work and at intervals during the course of work.
 - d. A quality control program shall be instituted which shall include visual assessment, tensile testing, radiographic inspection and other non-destructive testing.
 - e. Reference shall be made to EN ISO 17660 and CIRIA report 92.
 - f. In some cases it may be necessary to dowel in additional small diameter reinforcement to anchor back repairs to corners and arises. If adequate cover cannot be obtained reinforcement shall be of stainless steel to BS 6744. The method of doweling in reinforcement shall be approved by the Engineer.
 - g. All stainless steel reinforcement shall be pickled and passivated to approved methods before installation.
3. When instructed by the Engineer, all tie rod inserts, tie wires, chairs, steel spacers and other accessories shall have a concrete cover of 40mm.
4. Rust, scale, corrosion products and other deposits shall be removed from exposed reinforcement in the area of repair by grit blasting to achieve SA 2½.
5. Consideration shall be given to the protection of the general public and the immediate environs from grit and dust nuisance, noise pollution, undue disturbances and considerations of respect for quiet periods.
6. Grit blasting shall be carried out in such a way as to enable the shadow faces at the backs of bars and at intersections of bars to be cleaned to the same standard.
7. Grit blasting abrasives shall be new, clean, dry and of a grade suitable for the preparation of steel to the standard indicated above. Abrasives shall be of a type