

provide a tab to which a 5kg pull will be applied.

- b. Force shall be applied normal to the face of the structure by means of a spring balance.
- c. Lining adjacent to the welding strip shall be held against the concrete during application of the force.
- d. The 5kg force shall be maintained if a weld failure develops until no further separation occurs.
- e. Defective welds shall be retested after repairs have been made and following successful testing the tabs shall be neatly trimmed away.

13. Hot joint compounds such as coal tar shall not come into contact with the lining.

10.3.6 Installation of Preformed GRP Lining

- 1. The GRP lining shall be prefabricated and shaped to match the required dimensions and configurations, as shown on the drawings.
- 2. Installation shall be in sections as part of the concrete works and as required for proper concrete placement and GRP field jointing techniques.
- 3. The prefabricated GRP lining shall be adequately braced and carefully handled so that excessive damaging deflections or cracking of the lining do not occur during handling and installation.
- 4. The sheet lining shall be keyed and bonded into the concrete at the time of concrete casting. It shall be closely fixed to the formwork before erection and shall be cut and shaped to fit curved or complex profiles in a manner to minimize the number of joints. Care shall be taken not to puncture the lining in any way.
- 5. Any holes formed by nails for fixing the sheet lining to the formwork shall be in the zone that is to be covered by the subsequently applied sealing strips on the external face. All nails shall be of the headless type.
- 6. Joints between the sheets of lining shall be sealed on the concrete side to prevent loss of grout during concreting. After casting the concrete shall be left to cure for a minimum of 48 hours prior to striking the formwork. Shutters shall then be carefully removed allowing any nails to pull through the liner. Joints between the sheets of lining shall then be sealed.
- 7. Where pipes enter or leave lined structures the joints between the ends of the pipes and the lining shall be sealed as specified or shown on the drawings with sealants approved by the Engineer.
- 8. Where penstocks or the like are to be fitted to concrete walls protected with linings,