- f. Discard defective forms and end rings or adequately repair to the satisfaction of the Engineer.
- Accurately place reinforcement steel in the concrete wall. The minimum concrete cover over reinforcements shall be 25mm. Permissible variations shall be within the tolerance specified in BS EN 1916 and BS 5911.
  - a. Tie the reinforcement steel in the pipe barrel to the reinforcement steel in the pipe joint. Fabricate the reinforcement as a rigid cage of bars or wire fabric. Fabricate transverse reinforcement either as complete hoops, welded or lapped, or as a continuous helix. Finish off both ends of the cage as a complete hoop, when the transverse reinforcement is formed as a cylindrical helix, finished off both ends of the cage as a complete hoop.
  - b. Use lapped or butt welded type splices, tightly wired.
    - Butt weld splice must develop the full strength of the bar. Submit for testing, samples of welds proposed for use when required by the Engineer
    - Lap splice must extent 30 diameters when bars are being used for reinforcement, and 40 diameters when wire is being used.
  - c. Use suitable devices to hold the cage of reinforcement in its circular shape, and to maintain the cage in place within the forms during the placing and consolidating of the concrete.
  - d. Use sufficient longitudinal reinforcement to provide a rigid cage of reinforcement, providing enough longitudinal steel to provide a cage sufficient to retain its shape and position in the forms during the manufacturing process.

## 24.2.5 Marking of Pipes and Fittings

A. Marking shall be applied to pipes and fittings in such a manner that it is legible after installation and durable throughout the construction period. Each pipe and fitting shall be marked before dispatch from the pipe manufacturer's works as specified in BS EN 1916.