

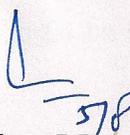
(a) At number of places, shear key/concrete around the sheathing duct is being damaged. After close study, it was observed that the gap between the shear key mould/ sheathing duct locator and bulk head surface is not being filled up with metal putty leaving little gap due to which the concrete is sticking and being damaged during removal of bulk head. Welded joint of shear key mould with Bulk head surface is also not smooth at few places. This point has been raised by undersigned on number of occasions but it is regretted to point out that still proper care is not being taken. The agency has deployed separate Engineers on every casting bed but it is felt that they are not paying due attention on these points.

(b) The surface of the bulk head before placing in position should be properly cleaned by buffing and only then shuttering oil should be applied. It was observed that one of the bulk head shutter placed in position for one segment was not properly cleaned and it was directed to remove the same for rectification.

(c) It was also observed that the some of the reinforcement bars of cage of spine segment are either touching the bulk head surface or the concrete surface of adjacent segment. This point was also raised on earlier occasion and it was directed to ensure proper cover all around the reinforcement in segments. This aspect should also be checked very meticulously in every segment.

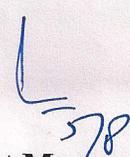
After detailed discussion and deliberations, it was observed that the Engineers of the Contractor are not taking due care despite repeated instructions. EE and AEs were directed to ensure that all these small but important points should be properly checked in a systematic manner at different stages by PWD as well as Contractors so that it becomes a routine and desired quality is achieved.

EE, F-131/F-134 was also directed to devise a system of proper quality control to be adopted in casting yard. The Third Party Quality Control Engineer presents during the site visits was also directed to check the various aspects thoroughly.

  
o/c Project Manager  
Flyover Project Circle F-13, PWD

**Copy to:-**

- (1) Chief Engineer, Flyover Project Zone F-1, PWD, 12<sup>th</sup> Floor, MSO Building, I.P. Estate, New Delhi for kind information please.
- (2) The Executive Engineer, FPD, F-131 for information & necessary action please.
- (3) The Executive Engineer, FPD, F-132 for similar action on quality control of segment casting.
- (4) The Executive Engineer, FPD, F-134 for information & necessary action please.

  
o/c Project Manager