

**SJVN Limited**  
**Vigilance Department**  
**Shakti Sadan, Shanan, Shimla**

Ref No: SJVN/VIG/Circular/2024-1241

Dated: 17.12.24

**System Circular**

During the intensive examination of civil works of one of the Hydro Electric Project by CTE wing of CVC, it has been observed that the number of tests carried out on different materials (Steel reinforcement, Structural steel, Plain Shotcrete, Rock Bolt, Water etc.) are less than the numbers prescribed in the Technical Specification (TS). Further, in certain cases testing of materials has not been done at all.


It has also been observed that in some of the items there is mismatch in the frequency of testing of samples as mentioned in the TS viz a viz Quality Assurance Plan conveyed to the contractor by the project authority. However, no justification has been recorded by the project authorities for such change. The same should be done with the proper justification and prior approval of the Competent Authority.

Henceforth, following is directed to all concerned:

- i. To ensure compliance of all testing requirements (including frequency of testing) of material / item as per Technical Specifications (TS) during execution of work. In extreme cases, where the testing requirement suggested in the Technical Specification / QAP is not possible during execution of work, the matter needs to be recorded with proper justification and prior approval is required to be taken from the authority who has approved the Technical Specification / Quality Assurance Plan.
- ii. Data of all the tests conducted at site shall be maintained in the attached format (Annexure-I) and it shall be made part of RA bill documentation. The payment shall not be made to contractor if tests of any material / item executed at site are not conducted as per the requirements of Technical Specification / Approved QAP.

This is issued for strict compliance at all levels.

This issues with the approval of CMD.

  
(Anil Kumar Goel)  
Dy. CVO, SJVN

Distribution: As per attached list.

Test Summary Sheet

RA Bill No:

RA bill date:

Summary Sheet No:

Date:

Sr. No.	Item / Material Description	Type / description of test	Quantity executed in Current RA bill	Total No of tests required to be conducted against quantity executed in Current RA bill as per TS/QAP/ applicable code	Total no of tests conducted against quantity executed in current RA bill	Total Quantity executed upto previous RA bill	Total no of Tests required to be conducted upto pervious RA bill as per TS / QAP / applicable code	Total no of Tests Conducted upto previous RA bill	Remarks

Note: It is certified that all the tests have been carried out as per the requirement of Technical Specification / QAP/IS / International Standard code and test results are meeting the requirements of relevant IS / International Standard code / TS/QAP.

The summary sheet shall be submitted to HOP for their perusal and approval.

Signature:

Signature:

Name of Quality Engineer:

Name of EIC:

Date:

Date:

*Signature*  
Date: *24/2/20*

**SJVN Limited**  
**Vigilance Department**  
**Shakti Sadan, Shanan, Shimla**

Ref No: SJVN/VIG/Circular/2024-1242

Dated: 17.12.24

**System Circular**

During the intensive examination of civil works of one of the Hydro Electric Project by CTE, CVC, it has been observed that the provisions of IS 456 (PLAIN AND REINFORCED CONCRETE- CODE OF PRACTICE) & SP-34 (Handbook on Concrete Reinforcement and Detailing) were not adhered during execution of work at site.

As per Clause 26.1 of IS 456 "Reinforcing steel of same type and grade shall be used as main reinforcement in a structural member. However, simultaneous use of two different types or grades of steel for main and secondary reinforcement respectively is permissible". Further, as per note to Clause 1.0 of SP-34 "Different types of reinforcing bars, such as plain bars and deformed bars of various grades, say Fe 415 (N/mm<sup>2</sup>) and Fe 500 (N/mm<sup>2</sup>) should not be used side by side as this practice will lead to confusion and error at site. However, during the intensive examination it has been observed that two different grades viz Fe-550 D and Fe-500 D were used side by side. This is not in order and in line with the codal requirement.

In order to address above issue in future, guidelines regarding the usage of various grades of Reinforcement Steel has been prepared and enclosed at annexure – A. Henceforth; it is directed to ensure the compliance of the guidelines during the execution of work at site.

This is issued for strict compliance at all levels.

This issues with the approval of CMD.

  
(Anil Kumar Goel)  
Dy. CVO, SJVN

Distribution: As per attached list.

## **Guidelines regarding the usage of various grades of Reinforcement Steel**

1. It should be ensured that the following clauses of Indian Standard Code are complied with:-
  - a) Clause 26.1 of IS 456: 2000, which states that *"Reinforcing steel of same type and grade shall be used as main reinforcement in a structural member. However, simultaneous use of two different types of grades of steel for main and secondary reinforcement respectively is permissible"*.
  - b) Note given along with Clause 1.0 of SP-34 stating *"Different types of reinforcing bars, such as plain bars and deformed bars of various grades, say Fe415 (N/mm<sup>2</sup>) and Fe500 (N/mm<sup>2</sup>), should not be used side by side as this practice will lead to confusion and error at site. However, secondary reinforcement such as ties and stirrups, may be of mild steel throughout even though the main steel may be of high strength deformed bars"*.
2. Owing to lower bond strength any grade of plain bars shall be avoided as reinforcement in RCC constructions.
3. Contractor should be instructed to plan the reinforcement steel requirements of various types grades sufficiently in advance and place his orders accordingly so that, appropriate types and grade are available at site when required and no such changes in grade or type are necessitated by non-availability of required reinforcement.
4. The type and grade of reinforcement steel should be specified clearly in design drawings. Appropriate notes should be given to avoid any ambiguity.
5. Quality control department at site should conduct checks to ensure that correct grade of reinforcement is being used at site. Regular audits should be conducted. Non-compliance, if any, observed by site quality control department, shall be reported immediately to concerned Corporate Design department / Corporate Quality department.
6. Appropriate measures should be taken at site to ensure that different grades of steel are easily distinguished and do not get mixed up during, transportation, storage and placement.



**SJVN Limited**  
**Vigilance Department**  
**Shakti Sadan, Shanan, Shimla**

Ref No: SJVN/VIG/Circular/2024-1243

Dated: 17.12.24

**System Circular**


During the intensive examination of civil works of one of the Hydro Electric Project by CTE, CVC, it has been observed that there is no monitoring of cement consumed/utilized in work by way of issue from cement register or cement go down. Theoretical consumption of cement was also not monitored. Thus, there was no control / monitoring of quantity of cement actually used in work.

It has also been observed that no provision exists in the contract documents of civil works, which provides for monitoring of cement consumed / utilized in work. However, it is necessary to monitor the actual consumption of cement consumed / utilized, in order to ensure the cement consumption in various items of work as per specified standards / approved mix designs to achieve the desired quality.

In view of above, a suitable clause has been provided in the ongoing contracts of LHEP-1, DSHEP and SDHEP which enables the Engineer in Charge (EIC) to monitor the consumption of major construction materials at the site linking it with the Contractor's applications of interim payments. The similar provisions will be also ensured in the future contracts. Henceforth, it is directed that appropriate format may be developed by EIC to ensure a proper monitoring of supply and consumption of major construction materials, and format shall be made part of submittals in the Interim Payments Certificates.

This is issued for strict compliance at all levels.

This issues with the approval of CMD.

  
(Anil Kumar Goel)  
Dy. CVO, SJVN

Distribution: As per attached list.

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Ref No: SJVN/VIG/Circular/2024-1244

Dated: 17.12.24

**System Circular**


During the intensive examination of civil works of one of the Hydro Electric Project by CTE, CVC, it has been observed that majority of royalty charges for material such as stone aggregate, sand, stone and other used in the work (on which royalty is payable) was paid directly to the concerned authorities by SJVN.

As per the contract provisions, it was the responsibility of the contractor to pay the royalty directly to the concerned authorities for all natural materials used in the work and provide the documentary evidence / certification from the concerned authorities along with Interim Payment Certificates in support of such payments. SJVN had to pay the royalty to the concerned authorities in the event that the Contractor fails to pay and settle the total amount of royalty and any claims are raised by the concerned authorities. As per the records, out of the total royalty deposited to the concerned authorities, approximately 88% of royalty was paid directly to the concerned authorities by SJVN. Further, the contractor was not instructed for every event of non-fulfillment of his contractual obligations.

Henceforth, it is directed that the contractor should be instructed time and again to fulfill his contractual obligations. In case, contractor fails to comply his contractual obligations, a notice shall be issued to contractor with immediate effect every time and the proper documentation of the same should be maintained to avoid any disputes in future.

This is issued for strict compliance at all levels.

This issues with the approval of CMD.

  
(Anil Kumar Goel)  
Dy. CVO, SJVN

Distribution: As per attached list.

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**Shakti Sadan, Shanan, Shimla**

Ref No: SJVN/VIG/Circular/2024-1245

Dated: 17.12.24

**System Circular**


During the intensive examination of civil works of one of the Hydro Electric Project by CTE, CVC, it has been observed that deviations were made by the project authority in the executed work viz-a-viz technical specification provided in the contract, without ascertaining the technical suitability and obtaining prior approval of Competent Authority. Further, no justification has been recorded by the project authorities before executing such deviations. However, the same should be done after obtaining prior approval of the Competent Authority and recording proper justification in the case file.

Henceforth, it is directed that during the execution of work at site, every effort should be made to strictly adhere to the Technical Specifications provided in the contract document. In extreme cases, where the compliance to Technical Specifications is not feasible, the matter needs to be recorded with proper justification and prior approval is required to be taken from Competent Authority. Further, before submitting the case for approval, comments from the concerned design department should be obtained to ensure the technical suitability of the proposed deviations or changes.

Additionally, the financial implications of any deviations should also be assessed in advance and recorded in case file. The necessary deduction be made promptly from the amount due to the contractor.

This is issued for strict compliance at all levels.

This issues with the approval of CMD.

  
(Anil Kumar Goel)  
Dy. CVO, SJVN

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