

CHAPTER No. 27

SPECIFICATION NO. 27.1—Quantities of Materials

1. Quantities of materials calculated in this chapter are based on the assumption that they conform to specifications of respective materials laid down in Chapter 3 of this volume.

2. The consumption factors given in this chapter can not be taken too rigidly. We allow certain tolerances for the sizes of materials like coarse aggregate and fine aggregate. Within these tolerances, the consumption of materials is likely to vary. The consumption factors also account for the wastage and breakage of materials during the construction, and this wastage and breakage cannot be uniform everywhere. It will vary with the working conditions and type of labour available. The actual consumption of material in the field may therefore be slightly different from those given in this chapter.

3. The consumption factors have been given in this chapter to serve as a guide for the analysis of rates, estimating and planning for the requirements of materials ahead of actual construction and to keep a control over the consumption of materials as the work proceeds.

4. On the completion of any work whether executed on through rates, labour rates or through departmental labour, the consumption statement shall be prepared for such materials as have been issued by Public Works Department. In order to determine the excess or short consumption of materials, the actual quantities issued to the work shall be compared with the theoretical worked out quantities on the basis of consumption factors given in Chapter 27 of Common Schedule of Rates. The consumption of materials for different items will normally conform to the quantities given in this chapter. However, if there is any excess or short consumption of materials, the following procedure should be adopted, unless otherwise specified:—

(a) For excessive consumption of material.—If actual consumption exceeds the theoretical consumption by 5 per cent or less, no action shall be taken. If actual consumption exceeds the theoretical consumption by more than 5 per cent, recovery should be made for the excessive consumption of materials beyond initial 5 per cent at penal rate provided in the contract. Where the excess consumption in the opinion of the executive engineer is substantially high, he shall bring such cases to the notice of the Superintending Engineer for further action, whose decision in all such cases will be final.

(b) For short consumption of materials.—Where the actual consumption of materials is short by 5 per cent or less, no action shall be taken when the work is executed on labour rates or departmentally.

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However, where the work is done on through rate basis, the recovery of costs of materials, thus saved, shall be made from the contractor at the issue rate. When the consumption of materials is short by more than 5 per cent and the work is being done on through rate basis, the rates of items shall be reduced or where it is not possible to determine the exact items on which short material has been used, the cost of materials shall be recovered from the contractor at the issue rate. When the work is done departmentally or on labour rates and the consumption is short by more than 5 per cent the Executive Engineer shall investigate the cause of such short consumption and shall bring to the notice of the Superintending Engineer all such cases, for such action against defaulting Government officials and contractor as he may deem fit. The decision of the Superintending Engineer in this matter shall be final. It shall also be determined whether the stability of the structure is affected adversely by short consumption of materials and in cases where it is felt that it is likely to be so, the work shall be rejected. The decision of Superintending Engineer in this regard shall be final.