

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

जल निष्कासन की इकाई दर विश्लेषण के लिए प्रोफार्मा

(IS 14590 का पहला पुनरीक्षण)

Draft Indian Standard

PROFORMA FOR ANALYSIS OF UNIT RATE OF DEWATERING

(First Revision of IS 14590)

**Measurement and Cost Analysis of Works for River
Valley Projects Sectional Committee, WRD 23**

**Last Date for Comments:
21/07/2022**

FOREWORD *(formal clauses of the foreword will be added later)*

In order to drain water out of the site of work and to maintain the work area in a fit condition dewatering is often resorted to during construction of river valley projects. As dewatering has been extensively resorted to in river valley projects being executed all over the country it was felt necessary to standardize the cost estimation of dewatering to bring uniformity in formats being used across different projects in the country.

The standard was published in 1998. The first revision of this standard has been brought out to bring the standard in sync with the latest field practices observed while using the standard and to bring it in the latest style and format of the Indian Standards. The major changes incorporated in this revision of the standard are:

- a) Relevant taxes and duties, wherever applicable, have been added in calculation of unit rates.
- b) Provisions for contractor's overheads and profits have been indicated.
- c) Clarification to use proforma for different sources of power.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, should be rounded off in accordance with IS 2: 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1 SCOPE

This standard lays down a proforma for analysis of unit rate of dewatering carried out in river valley projects.

Note : The standard should be read in adjunct to IS 11590.

2 REFERENCES

The standards listed below contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
11590 : 1995	Guidelines for working out unit rate cost of the construction equipment used for river valley projects (<i>first revision</i>)

3 PROFORMA

3.1 The proforma recommended for use in analysis of unit rate of dewatering is given in Annex A.

ANNEX A
(Clause 3.1)

TABLE 1 PROFORMA FOR UNIT RATE ANALYSIS OF DEWATERING

Sl. No. (1)	Item (2)	Unit (3)	Quantity (4)	Rate (5)	Amount (6)
i)	<i>Equipment</i>				
	Dewatering Equipment (Diesel/Electric/ Pneumatic) (see IS 11590)	hours			
ii)	<i>Installation</i>				
	a) Pipes	meter			
	b) Reducers, bends well points, casings, etc.	numbers			
	c) Valves	numbers			
	d) Labor for Installation	lump sum			
iii)	<i>Overhead and Miscellaneous</i>				
	a) Labor for dewatering (other than running of equipment)	man-month			
	b) Temporary construction	lump sum			
	c) Lighting	lump sum			
	d) Maintenance of installations and temporary constructions	lump sum			
	e) Demobilization of equipment, installations, etc.	lump sum			
	f) Contingencies	lump sum			

- g) *Taxes and duties* :
 - i. Sales Tax on works
 - ii. Services tax
 - iii. Labour Cess
 - iv. VAT
 - v. Entry tax

- iv) *Analysis*
 - a) Total equipment/pump running hours at one location before shift to another location, in hours hours (h)
 - b) Power rating of the equipment, (P) kW
 - c) Total Cost (C_T) = Use cost of equipment + Cost of installation + Cost of overheads & miscellaneous
 - d) Residual value of pipes, reducers, bends etc. (C_R)
 - e) Cost of dewatering = $(C_T - C_R) \div (P \times h)$ per kW h

NOTES

- i) **Contractors overheads and profit may be decided suitably in the project.**
- ii) The rate analysis for different sources of power (DG, Grid power, etc.) should be worked separately.