

RED FiDiC Book: Measurement & Payment (M&P)

Contractual agreed Unit Rates (BoQ) or new rates/prices (Variations, Provisional Sums and Claims) to being determined by SC12.3+SC03.5

The below attached article about "Measurement" brought our attention to the procedural rules for different events and circumstances to deal with M & P.

We take the opportunity to brush up our knowledge with a respectable synergy effect, too.

Type of Procedures, Evaluations (SC12.3), Measurement & Payments (SC12.1+12.2)

Contract Agreement Re-measured Quantities for BoQ and Unit Rates UR to calculate the amounts.	Variation (SC13.1) and Provisional Sums (SC13.5)	Claims SC20.1 + events / circumstances
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Basic Contractual Topics to consider – in compliance with the GCC – of Red FIDIC Book.

<p>Contract Agreement</p> <p>A _ Employer's Design Drawings with notes demonstrate the Scope of Works (nature and extent).</p> <p>B _ Contractor's performance / scope of Works (nature and extent) = permanent works with all temporary, ancillary, and auxiliary activities incl. procurement requirements, as specified in the Method of Measurement for the BoQ-item. Note: Up-dated "Specification" [SC01.5(f)] (tech provisions) itself usually provide the actual – not superseded – GIPs, how to execute the defined Scope of Works (Drawings) with the material requirements, methods of construction, and testing tolerances.</p>	<p>Engineer gives Instruction inclusive Engineer's modified / altered drawings for execution of varied Works</p> <p>a _ with submission of Variation Proposal VP OR b _ without submission of Variation Proposal VP > Contractor should submit a Notice of Claim immediately. The INSTRUCTION allows to begin with the execution of Works. Request to being acknowledged within 2 working days under SC03.3(b).</p>	<p>Claims entitle the Parties for compensation (03.5+ClaimSC.pdf) under the pre-condition of timely submitted (i) Notice of Claim & (ii) Notice of Request with fully detailed particulars and preferably with a revised Work Program (SC08.3/SC08.6) with adjusted EoT.</p>
<p>C _ Method of Measurement Book "specifies" all the s BoQ-item within the Unit Rates UR >>> re-measure</p> <p>C1 ... actual (built) net quantities of permanent works (SC12.2 a+b) in compliance C2 ... with Employer's Design & pay in acc. With the BoQ-items / Unit Rates UR.</p>	<p>If VP have been requested by ENG without instruction, the Evaluation, Consultations and Determination of VP (SC12.3+SC03.5) takes time, and the Contractor has to wait ahead of execution.</p>	<p>(iii) within the 28/42 days since awareness date. >>> Refer to Reasons of Contractor and Employer's Entitlements : www.PPE61.de/03.5+ClaimSC.pdf</p>
<p>C1 _ Actual Net Quantities of the Permanent Works > Attention shall be given in order to derive the Unit Rate !!! i.e. Earthworks: Excessive excavation for working space, safety slopes, backfill, transport, overhaul, disposal to spoil, spread, other activities ... are included in the Unit Rate UR and will not paid separately. Hence the Unit Rate UR has to cover all this additional temporary works. Note: German VOB / ATV-methods differs from the net quantity approach. Contractor's un-experienced Cost Estimators for financials</p>	<p>Definition Costs pursuant to SC01.1.43: <i>"Cost" means all expenditures reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit</i></p>	

Bids/Quotes based on FIDIC Red Book may not consider this additional work load in their UR.		
C2 _ Basis are records / As-Built drawings The net dimension of the permanent works (e.g. designed earthworks levels and not “spoiled fill” shall be measured and paid. Only the quantities which are based on the Employer’s Design final ground levels and dimensions will be re-measured and paid. Very often Consultants play with “these uncertainties” in the Design – deliberately? www.ppe61.de/12.2+ValueEngineering.pdf	Alterations and Modifications of design by the Engineer / SC 13.1 [Right to Vary] and subsequent Engineer’s request to the Contractor’s VP will be evaluated according with SC 12.3 [Evaluation] <i>!!! Value Engineering (SC13.2) > Contractor’s Design Service and loss of time probably not been compensated by the FEE!!!</i>	Design Responsibilities of the Engineer for Red FiDiC Book. Exceptional allocation of design services to Contractor: scope and extent clearly defined in PCC. Please refer to Engineer’s Design Duties www.ppe61.de/S+DesignDuties.pdf
Procedural Rules for Measurement (Clause 12) and Payment (Clause 14) for BoQ		
SC12.1 [Works to be measured] para 1: reasonable Notice period shall be provided from the Engineer to Contractor to attend the “Measurement”	.analog BoQ	.analog BoQ
SC12.1 para 2: If the Contractor fails to attend the measurement proceedings (in the field), the Engineer’s measurement shall be accepted and accurate	.analog BoQ	.analog BoQ
SC12.1 para 3: The Engineer prepares the records with the contractual Methods of Measurement [SC12.2 (a)+(b)] , the Contractor shall – as and when requested – to agree to the Engineer’s records.	.analog BoQ	.analog BoQ
SC12.1 para 4: Does the Contractor disagree to the records? The Engineer shall vary or confirm.	.analog BoQ	.analog BoQ
SC12.1 para4: If the Contractor does not object the records within 14 days, the Engineer’s records shall be accepted as accurate.	.analog BoQ	.analog BoQ
SC12.3 refers to BoQ, >>> except as otherwise stated in the Contract = BoQ) Unit Rate subject to BoQ items.	SC12.3 refers to Variations / Provisional Sums SC13.5 + SC03.5 [Determinations]	SC12.3 refers to Claims + SC03.5
SC14.3: Contractor submits the IPA (considers himself to be entitled !!!) with the precedence order / sequential listed as defined in Sub-Clause 14.3 (a) to (g).		
Split in Currency of Payment (SC14.7/14.15)		
SC14.6: Engineer certifies the IPA / IPC (SC14.6) and sends the IPC to Employer for approval (inform Contractor only, without enclose the certified IPC!)		
Approval of Employer awaiting;		
Issuance of certified and approved IPC to Contractor within 28 days since IPA was submitted.		
Employer’s duty-to-pay (SC14.7 Payment) within 56 days.		
File name: 12+Measurement&Payment.pdf		

1 **The following article is disseminated by EAY**
2 *For further information please contact eay@eayglobal.com*

3 **How to Measure and Value the Works under the 1999 FIDIC Red** 4 **Book**

5 *“The methods of measurement and valuation should be specified clearly to avoid future*
6 *disputes.”*

7 In accordance with **Clause 12 [Measurement and Evaluation]**, Works should be **measured** and
8 **valued** for payment.

9 In the beginning of the process, **the actual quantities have to be measured.**

10 The Engineer gives **Notice to the Contractor’s Representative** and then **the measurement**
11 **procedure begins.**

12 **Afterwards, the appropriate rate or price should be determined.**

13 **While determining the appropriate rate or price;**

14 ► **The rate or price specified for the item in the contract** may be the appropriate rate or price.

15 ► **If there is no such item**, the rate or price **specified for similar work** will be the appropriate rate or
16 price.

17 ► **In certain circumstances, a new rate or price** may be appropriate.

18 **Ultimately, the Engineer determines the value of each item of work by applying the measured**
19 **quantities and rates or prices** in accordance with **Sub-Clause 12.3 [Evaluation]**.

20 **In this document, you will find the key issues and the procedure for the measurement and**
21 **valuation of the Works under the 1999 FIDIC Red Book.**

22 **Steps of Measurement and Evaluation Procedure**

23 **1. Notice to the Contractor’s Representative**

24 **2. Measurement Procedure**

25 **3. Agreement or Determination of the Measurement**

26 **4. Selecting the Appropriate Rate or Price**

27 **5. Evaluation of the Works**

28 29 **1 Notice to the Contractor’s Representative**

30 **The Engineer is to give a Notice to the Contractor’s Representative** for the measurement of
31 the works.

32 33 **2 Measurement Procedure**

34 **The details to be considered are [1];**

35 **(a) Measurement shall be made of the net actual quantity of each item of the Permanent**
36 **Works**, and,

37 **(b) The method of measurement shall be in accordance with the Bill of Quantities or other**
38 **applicable schedules.**

39 **Measurement Process**

40 **1. While realizing the measurement, the Contractor’s Representative is to;**

41 ► **Attend or send** a qualified representative to **assist** the Engineer.

42 ► **Provide the particulars** that are **required by the Engineer.**

43 **2. If the Contractor fails to attend or send a representative**, the measurement made is to be
44 accepted as accurate.

45 **Measurement from Records**

46 **Permanent Works are to be measured from records** except as otherwise stated in the Contract.

47 **And, these records are to be prepared by the Engineer.**

48 **1. The Contractor is to attend to examine and agree the records** with the Engineer, and
49 shall **sign the same** when agreed.

50 **2. If the Contractor fails to attend, the records are to be accepted as accurate.**

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3 Agreement or Determination of the Measurement

If the Contractor examines the measurement records but does not agree with the Engineer regarding the measurement.

1. The Contractor is to give a Notice to the Engineer in relation to the records' being inaccurate.

► If the Contractor fails to give a Notice to the Engineer within 14 days after being requested to examine the records, the records are to be accepted as accurate.

2. After receiving a Contractor's Notice;

► The Engineer is to review the records and either confirm or vary them.

4 Selecting the Appropriate Rate or Price

The appropriate rate or price for each item is to be specified in the Contract or specified for similar work (if there is no such an item).

A new rate or price is to be appropriate for an item of work if [2]:

(a)/(i) The measured quantity of the item is changed by more than 10% from the quantity of this item in the Bill of Quantities or other Schedule. AND

(ii) This change in quantity multiplied by such specified rate for this item exceeds 0.01% of the Accepted Contract Amount. AND

(iii) This change in quantity directly changes the Cost per unit quantity of this item by more than 1%, AND

(iv) This item is not specified in the Contract as a "fixed rate item":

or

(b)/(i) The work is instructed under Clause 13 [Variations and Adjustments]. AND

(ii) No rate or price is specified in the Contract for this item, AND

(iii) No specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

Each new rate or price is to be produced from any relevant rates or prices that are specified in the Contract with fair adjustments in accordance with the above mentioned paragraphs.

Otherwise, it is to be derived from the reasonable cost of executing the work and profit, assessing any other relevant matters.

5 Evaluation of the Works

By evaluating each item of the work, the Engineer is to proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the Contract Price applying;

1. The measurement agreed or determined in accordance with Sub-Clause 12.1 [Works to be Measured] and 12.2 [Methods of Measurement].

2. The appropriate rate or price for the item.

FOOTNOTES

1. The same Sub-Paragraph letters are used as in Sub-Clause 12.2 [Method of Measurement] of the 1999 FIDIC Red Book.

2. The same Sub-Paragraph letters are used as in Sub-Clause 12.3 [Evaluation] of the 1999 FIDIC Red Book.

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