

# FIDIC Red Book Thoughts to SC 13.2 Value Engineering

## A\_ Situation Value Engineering VE

of Red Book 1<sup>st</sup> and 2<sup>nd</sup> edition / RB 1999 + 2017 ... a comparison is demonstrated in the table below.

## B\_ Cost/Turnover Balance

Does the “prospective fee” (quantum risk) of SC13.2 will cover all the Costs for delay times (EoTfC) due to deployment of design team, design service costs, waiting period of Employer’s and Engineer’s approval, under-coverage of Preliminary and General Provisions / P&G due to lower turnover, extra time loss and reimbursement for prolongation???

## C\_ Intellectual Propriety Rights IPR.

Has the Contractor an advantage, if he secures his IPRs for his “innovative” Value Engineering Design (Proposal and Execution of Works) against Employer’s initial Tender Dossier Design Documents?

## D\_ Interpretation of Value Engineering

SC 13.2 para4 & [Contractor’s Obligation](#) SC 04.1 sub-para (a)-(h)

D1 ... The design costs are in the sphere of the Contractor, only the permanent works shall be re-measured and paid and the 50% (1999) and shared (2017 = half-half is missing) FEE / difference of advantage is a vast risk factor.

D2 ... The SC04.1 (a)-(d)-(h) sub-paragraphs refer to the DESIGN instructed to the CONTRACTOR Interim Assessment: does it make sense to request Value Engineering / optimization of the design by the Contractor – with all the disruptions/delays and own costs – with no reimbursement opportunity. Do you think in this direction as well?

[E >>> Why shall the Contractor shall take over the delay risk, design costs and fee risk esp. for the “QUANTUM” to submit a Value Engineering Design subject to the criteria of SC13.2](#)

[Who can provide a convincing statement](#), when does it make sense, [to change the Employer’s design](#) with no RISKS losing reimbursement [for all incurred costs?](#) 50% share?

## Recommendation in Compliance with Contract Law // SC 13.2 Value Engineering (VE)

A [warning / advance notice](#) about the deficient / erroneous DESIGN will suffice. A request to the Engineer about the way forward should be submitted to get e.g. [an instruction](#).

Note: (i) the modification of the design to execute the variation (SC13.1) falls under the Engineer’s responsibility [without](#) Engineer’s [request](#) of Variation Proposal. (ii) simultaneously a Notice of Claim for disruption and delay times shall be submitted – if Design is requested / instructed with the Employer’s approval – and (iii) other Reasons (delay in Employer’s drawings, possession of site, UPC, ...) entitle the Contractor for Time, cost plus profit (if any) compensation anyway. ([www.ppe21.de/03.5+ClaimSC.pdf](http://www.ppe21.de/03.5+ClaimSC.pdf))

Your comments are highly appreciated to [Emma@PPE61.de](mailto:Emma@PPE61.de) Thank you very much in advance.

## A\_ Situation of Red Book > Comparison SC13.2 [Value Engineering] between the Red Book Versions Designed by Employer, Build by the Contractor.

Red Book 1999 – SC13.2 VE		Red Book 2017 – SC13.2 VE		Remarks
13.2 .p1	<a href="#">Value Engineering:</a> The Contractor may, <b>at any time</b> , submit to the Engineer a <b>written proposal</b> which (in the Contractor’s opinion) will, if	13.2 .p1	<a href="#">Value Engineering:</a> The Contractor may, <b>at any time</b> ,	Congruent

	adopted, (i) to <b>accelerate</b> completion, (ii) reduce the <b>cost</b> to the Employer of <b>executing, maintaining or operating</b> the Works, (iii) improve the <b>efficiency or value</b> to the Employer of the completed Works, or (iv) otherwise be of <b>benefit to the Employer</b> .		submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted: a) <b>accelerate</b> completion; (b) reduce the <b>cost</b> to the Employer of <b>executing, maintaining or operating</b> the Works; (c) improve the <b>efficiency or value</b> to the Employer of the completed Works; OR (d) otherwise, be of <b>benefit</b> to the Employer.	
Red Book 1999 – SC13.2 VE		Red Book 2017 – SC13.2 VE		Remarks
.p2 REF	The proposal shall be <b>prepared at the cost of the Contractor</b> and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].	.p2 REF	The <b>proposal shall be prepared at the cost</b> of the Contractor and shall include the <b>details as stated</b> in sub-paragraphs (a) to (c) of Sub-Clause 13.3.1 [Variation by Instruction].	congruent
		.p3	The Engineer shall, <b>as soon as practicable</b> after receiving such a proposal, respond by giving a Notice to the Contractor stating <b>his/her consent or otherwise</b> . The Engineer's consent or otherwise shall be at the <b>sole discretion of the Employer</b> . The Contractor shall not <b>delay any work while awaiting a response</b> .	Time bar introduced  Employer's sole discretion (in principle clear, change in Design and Specification)
	Please refer to SC13.2 p3 (c.)	.p4  REF para4	If the Engineer gives his/her consent to the proposal, with or without comments, the <b>Engineer shall then instruct a Variation</b> . Thereafter, the Contractor shall submit any further particulars that the Engineer may reasonably require, and the <b>last paragraph of Sub-Clause 13.3.1 [Variation by Instruction]</b> shall apply which shall include consideration <b>by the Engineer of the SHARING (if any) of the benefit, COSTs and/or DELAY</b> between the Parties stated in the Particular Conditions.	Clarification provided: Instruct a Variation.  Sharing 50%?
.p3  .p3(a)  .p3(b) REF	If a proposal, which is approved by the Engineer, includes a <b>change in the design</b> of part of the Permanent Works, then unless otherwise agreed <b>by both Parties</b> : (a) the <b>Contractor shall design</b> this part, (b) sub-paragraphs <b>(a) to (d)</b> of Sub-Clause <b>4.1</b> [Contractor's General Obligations] shall apply, and	.p5  REF	If a proposal under this Sub-Clause, to which the Engineer gives his/her consent, <b>includes a change in the DESIGN</b> of part of the Permanent Works, then unless otherwise agreed by both Parties: (i). the Contractor <b>shall design</b> this part at his/her cost; AND (ii) <b>sub-paragraphs (a) to (h) of Sub-Clause 4.1</b> [Contractor's General Obligations] shall apply	Delta. in principle no, only SC 04.1(e.), (f), (g), (h) shall be observed.
Red Book 1999 – SC13.2 VE		Red Book 2017 – SC13.2 VE		Remarks
.p3(c.)	(c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with <b>Sub-Clause 3.5 [Determinations]</b> to agree or determine a <b>fee</b> , which shall be included in the Contract Price.  This fee <b>shall be half (50%) of the difference</b>		>Incorporated in other sub-clauses	

	<p>between the following amounts:</p> <p>(i) such <b>reduction in contract value</b>, resulting from the change, <b>excluding</b> adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and</p> <p>(ii) <b>the reduction (if any) in the value to the Employer of the varied works</b>, taking account of any reductions in quality, anticipated life or operational efficiencies.</p>			
.p4	<p>However, if amount (i) is less than amount (ii), there shall not be a fee.</p>			logic
13.3	<p><b>Variation Procedure:</b> If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:</p> <p>13.3(a), (a) a <b>description of the proposed work</b> to be performed and a <b>programme</b> for its execution,</p> <p>13.3(b), (b) the Contractor's proposal for any necessary <b>modifications to the programme</b> according to Sub-Clause 8.3 [Programme] and to the <b>Time for Completion</b>, and</p> <p>13.3(c), (c) the Contractor's <b>proposal for evaluation of the Variation</b>.</p> <p>The Engineer shall, as soon as practicable after receiving such proposal (under SubClause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments.</p> <p>The Contractor shall not <b>delay any work whilst awaiting a response</b>.</p> <p>Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt. Each <b>Variation shall be evaluated in accordance with Clause 12</b> [Measurement and Evaluation], unless the <b>Engineer instructs or approves</b> otherwise in accordance with this Clause.</p>	13.3.1  Last para4	<p><b>Variation by Instruction &gt;&gt;&gt; last paragraph</b> The Engineer shall then proceed under Sub-Clause 3.7 [Agreement or Determination] to agree or determine:</p> <p>(i) <b>EOT</b> if any, and/or</p> <p>(ii) the adjustment to the Contract Price (including <b>valuation of the Variation</b> in accordance with Clause 12 [Measurement and Valuation] using <b>measured quantities of the varied work</b>)</p> <p>(and, for the purpose of Sub-Clause 3.7.3 [Time limits], the <b>date</b> the Engineer receives the Contractor's submission (including any requested further particulars) shall be the <b>date of commencement of the time limit for agreement under Sub-Clause 3.7.3</b>).</p> <p>The Contractor shall be entitled to such EOT and/or adjustment to the Contract Price, <b>without any requirement to comply with Sub-Clause 20.2 [Claims For Payment and/or EOT]</b>.</p>	Usually, any instruction must be obeyed without delay. The gap between usual Variation Proposal initiated by Engineer.
Red Book 1999 – SC13.2 VE		Red Book 2017 – SC13.2 VE		Remarks
SC04.1 .p1-p4	<p><b>Contractor's General Obligations</b> .....</p>	SC04.1	<p><b>Contractor's General Obligations</b> .....</p>	
.p5	<p>If the Contract specifies that the Contractor shall <b>design any part of the Permanent Works, then unless otherwise stated in the Particular Conditions:</b></p>			
04.1(a)	<p>(a) the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the <b>procedures</b> specified in the Contract;</p>	04.1(a)	<p>(a) the Contractor shall prepare, and submit to the Engineer for Review, the Contractor's Documents for this part (and any other documents necessary to complete and implement the design during the execution of the Works and to instruct the Contractor's Personnel);</p>	
04.1(b)	<p>(b) these Contractor's Documents shall be in accordance with the <b>Specification</b> and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include</p>	04.1(b)	<p>(b) these Contractor's Documents shall be in accordance with the <b>Specification and Drawings</b> and shall include additional information</p>	

<p>04.1(c.)</p> <p>04.1(d)</p>	<p>additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;</p> <p>(c) the Contractor shall be <b>responsible for this part</b> and it shall, when the Works are ~ completed, <b>be fit for such purposes for which the part is intended</b> as are specified in the Contract; and</p>	<p>04.1(c.)</p> <p>04.1(d)</p>	<p>required by the Engineer to add to the Drawings for co-ordination of each Party's designs. If the Engineer instructs that further Contractor's Documents are reasonably required to demonstrate that the Contractor's design complies with the Contract, the Contractor shall prepare and submit them promptly to the Engineer <b>at the Contractor's cost</b>;</p> <p>(c) construction of this part shall not commence until a Notice of <b>No-objection is given (or is deemed to have been given)</b> by the Engineer under sub-paragraph (i) of <b>Sub-Clause 4.4.1 [Preparation and Review]</b> for all the Contractor's Documents which are relevant to its design, and construction of such part shall be in accordance with these Contractor's Documents;</p> <p>(d) the <b>Contractor may modify</b> any design or Contractor's Documents which have previously been <b>submitted for Review</b>, by giving a Notice to the Engineer with reasons. <b>If the Contractor has commenced construction of the part of the Works to which such design or Contractor's Documents are relevant, work on this part shall be suspended, the provisions of Sub-Clause 4.4.1 [Preparation and Review] shall apply as if the Engineer had given a Notice in respect of the Contractor's Documents under sub-paragraph (ii) of Sub-Clause 4.4.1 , and work shall not resume until a Notice of No-objection is given (or is deemed to have been given)</b> by the Engineer for the revised documents;</p>
<p>4.1(d)</p>	<p>RB : sub-paragraph (e.)-(h) does not exist.</p> <p>(d) prior to the <b>commencement of the Tests on Completion</b>, the Contractor shall submit to the Engineer the <b>"as-built" documents and operation and maintenance manuals</b> in accordance with the Specification and in <b>sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works.</b> Such part shall not be considered to be completed for the <b>purposes of taking-over</b> under Sub-Clause 10.1 [Taking Over of the</p>	<p>04.1(e.)</p> <p>04.1(f)</p>	<p>Added (e.)-(h).</p> <p>(e) the Contractor shall be responsible for this part and it shall, when the Works are completed, <b>be fit for such purpose(s) for which the part is intended as are specified in the Contract (or, where no purpose(s) are so defined and described, fit for their ordinary purpose(s))</b>;</p> <p>(f) in addition to the Contractor's undertaking above, the <b>Contractor undertakes that the design and the Contractor's Documents for this part will comply with the technical standards stated in the Specification and Laws (in force when the Works are taken over under Clause 10 [Employer's Taking Over])</b> and in accordance with the documents</p>

	<p>Works and Sections] until these <b>documents and manuals</b> have been submitted to the Engineer.</p>	<p>04.1(g) forming the Contract, as altered or modified by Variations; (g) if Sub-Clause 4.4.2 [<b>As-built Records</b>] and/or Sub-Clause 4.4.3 [<b>Operation and Maintenance Manuals</b>] apply, the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with such Sub-Clause(s) and in sufficient detail for the Employer <b>to operate, maintain, dismantle, reassemble, adjust and repair this part</b>; and (h) if <b>Sub-Clause 4.5 [Training]</b> applies, the Contractor shall carry out training of the Employer's Personnel in the operation and maintenance of this part.</p>	
Red Book 1999 – SC13.2	Red Book 2017 – SC13.2	Remarks	
		<p>03.7.3 <b>Time limits</b> The Engineer shall give the Notice of <b>agreement</b>, if agreement is achieved, within <b>42 days or within such other time limit</b> as may be proposed by the Engineer and agreed by both Parties (the "time limit for agreement" in these Conditions), after:</p> <p>(a) in the case of a matter to be agreed or determined (not a Claim), the <b>date of commencement</b> of the time limit for agreement as stated in the applicable Sub-Clause of these Conditions;</p> <p>(b) in the case of a Claim under subparagraph (c) of Sub-Clause 20.1 [<i>Claims</i>], the date the Engineer receives a Notice under Sub-Clause 20.1 from the claiming Party; or</p> <p>c.) in the <b>case of a Claim under subparagraph (a) or (b) of Sub-Clause 20.1 [Claims], the date the Engineer receives:</b></p> <p>(i) a fully detailed Claim under Sub-Clause 20.2.4 [<i>Fully Detailed Claim</i>]; or (ii) in the case of a Claim under Sub-Clause 20.2.6 [<i>Claims of continuing effect</i>], an interim or final fully detailed Claim (as the case may be)..</p> <p>The Engineer shall give the <b>Notice of his/her determination within 42 days</b> or within such other time limit as may be proposed by the Engineer and agreed by both Parties (the "time limit for determination" in these Conditions), after the date corresponding to his/her obligation to</p>	

		<p>proceed under the last paragraph of Sub-Clause 3.7.1 <i>[Consultation to reach agreement]</i>.</p> <p>If the <b>Engineer does not give the Notice of agreement or determination</b> within the relevant time limit:</p> <p>(i). in the <b>case of a Claim</b>, the Engineer shall be deemed to have given a determination <b>rejecting the Claim</b>; or</p> <p>(ii). in the case of a matter to be agreed or determined, the matter shall be deemed to be a <b>Dispute</b> which may be referred by either Party to the DAB for its decision under Sub-Clause 21.4 <i>[Obtaining DMB's Decision]</i> without the need for a NOD (and Sub-Clause 3.7.5 <i>[Dissatisfaction with Engineers determination]</i> and sub-paragraph (a) of Sub-Clause 21.4.1 <i>[Reference of a Dispute to the DMB]</i> shall not apply).</p>	
--	--	---	--

## B \_ Cost/Turnover Balance

	Does the “prospective fee” (quantum risk) of SC13.2 will cover all the Costs for delay times (EoTfC) due to deployment of design team, design service costs, waiting period of Employer’s and Engineer’s approval, under-coverage of Preliminary and General Provisions / P&G due to lower turnover, extra time loss and reimbursement for prolongation?	
	Think about the procedure, the risks, the incurred costs for design, the loss of time with compensation and uncertain quantum of FEE.	
	If you scrutinize the Conditions of Contract, would you still go for a Value-Engineering Design? Why shall you optimize with high risks of reimbursement of ALL your costs and delay periods.	

## C \_ Intellectual Propriety Rights IPR

	<p>Parties should address the Intellectual Property Rights IPR, if the Engineer instructs or orders the specified <b>Design Works laid down in the Particular Conditions of Contract</b>, to design portions of the Works.</p> <p>Besides interfaces between Employer’s Design and Contractor’s Design may have an impact and causes disputes about <b>warranties</b> during the Defect Notification Period and during the legal warranty periods, if specific contractual agreed – in compliance to the ruling Government Law.</p> <p>More information shall be retrieved for better clarification and deliberations.</p>	
--	--	--

## D \_ Interpretation of Sub-Clauses / sub-paragraphs SC 13.2 para and SC04.1(a)to(h)

	VE / VP - Procedure is being prescribed in more detailed steps with defined time bars for clarity.	
	No extra claim procedure is required, expressly stated – as in previous versions as well, however in other sub-clauses.	



	<p>Engineer's idleness automatically rejects (as in previous FIDIC versions) and the Contractor can submit straight his referral to the DAAB – without NOD – as in previous versions.</p>	
<p>E _ Your opinion about the <b>Interpretation of SC 13.2 para and SC04.1(a)to(h)</b> is highly appreciated. Please response to <a href="mailto:Emma@PPE61.de">Emma@PPE61.de</a> . Thank you very much in advance.</p>		
	<p>Additional information given about Design DUTIES in context with the conditions of RED FIDIC Book principles / doctrine.</p>	
	<p><b><i>Design Responsibilities lists</i></b>  <i>Services, Works / functional documents, VAR + Claims, "Evaluation" / Valuation"</i>  and    <b>Design Duties</b></p>	<p>Design Responsibility  <a href="http://www.ppe61.de/S+DesignResponsibility">[www.ppe61.de/S+DesignResponsibility]</a>    <b>Design Duties of Employer/Consultant, Contractor and Design Sub-Contractor:</b>  Service Contract, Works Contract, Sub-Contract Design with sophisticated, intelligent Baseline Program, frequently <b>revised WP, adjusted / adapted Time for Completion (prologation, EoTfC)</b>    <a href="http://www.PPE61.de/S+DesignDuties.pdf">www.PPE61.de/S+DesignDuties.pdf</a></p>
<p>File name of the document: <a href="#">13.2+ValueEngineering.pdf</a></p>		