
	Offshore Design Section Engineering Services ISO – 9001:2008	Addendum to Functional Specification for Unbonded Flexible Pipes for Submarine Pipelines	Spec. No.	2020E
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Addendum to Specification for Unbonded Flexible Pipe For Submarine Pipelines

**OIL AND NATURAL Gas CORPORATION LTD.
INDIA**

R.P. PUROHIT CE(C&M)		ROHIT PANT DGM(M)		S.NARAIN Dy.G.M.(C&M)
R.K. GUPTA Dy.G.M.(C&M)	N.V.PAI DGM(C&M)		B.P.MALIK Dy.G.M.(C&M)	K.P.VARGHESE Dy.G.M.(C&M)
PREPARED BY				
A.K.MISHRA Dy.G.M. (C&M)		D.R. KAMBLE GM(C&M)		
REVIEWED BY		APPROVED BY		
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ADDENDUM

Specification No. :2020E Rev.4

Title : Functional Specification for Unbonded Flexible Pipe for Submarine Pipelines

Following additional requirements shall be applicable:

(New) :

Flexible Pipe Vendor shall be involved at every stage from the pipeline route planning stage to flexible pipeline lay including crossing installation and pulling of flexible pipeline pulling of I/J tube. ***Flexible pipe vendor shall be involved for vetting / supervision, in general but not limited to following activities:***

1. Vetting of 'flexible pipeline route'. This is required to ensure a route leading to minimum of excess pipe at arrival at the last end to be installed so as to firm-up optimum length of flexible pipe segment. Further, Flexible Pipe vendor shall advise a planned approach for placing the excess pipe length on the sea bed in a safe manner so as to avoid any kinks and other damages leading to potential pre-mature failure / reduction of life of flexible pipeline segment.
2. Vetting of I/J tube including bell mouth design
3. Vetting of flexible pipe lay analysis , lay procedure, procedure for crossing installation , procedure for pulling of flexible pipe through I/J tubes
4. Offshore installation of flexible pipeline segments ***under the expert guidance, monitoring and supervision of 'representative of flexible pipe vendor'*** on board the offshore pipe lay vessel at offshore. Supervision of flexible pipeline installation includes flexible pipe lay on the design route as per lay tolerances given at ONGC FS 2015 / FS 2015 A including strict compliance/ adherence of ONGC drawings for 'Clearance of Drilling Rig' near platform(s) , crossing installation , pulling of flexible pipe through I/J tube etc. ***Representative of Flexible pipe vendor will issue a certificate regarding satisfactory completion of each activity for flexible pipeline segment(s) carried out under his supervision as per the approved procedures.***
5. ***Representative of flexible pipe manufacturer on board the vessel shall perform local repairs to the outer sheath of flexible pipe in case damage occurs to the pipe despite all preventive measures. Flexible pipe manufacturer's representative shall be given unlimited access to information and to the control room / diver control during the operation.***