QUESTIONNAIRE FOR DEVELOPMENT OF RAS/FAS

Q.1. List of regulations and standards that would be complied in design, development and operation in marine environment of the system. Indicative list of standards are as under:-

S.No	Description	Standard
(a)	Replenishment at Sea	NATO ATP 16(D)/MTP 16(D)
(b)	Requirements for Replenishment at Sea	DEFSTAN 07-279
(c)	Requirements for the Design and Installation of Fuel Systems	DEF STAN 02 - 320
(c)	Admiralty Manual of Seamanship	BR 67
(d)	RAS probe/receiver fuel coupling	BR 6583
(e)	Class Rules	LRS/IRS/RINA rules & regulations for classification of ships
(f)	Tally/ diagram plates	NES 723

Q.2. What is Replenishment/Fueling at Sea?
How is RAS undertaken onboard ship?
How is FAS undertaken onboard ship?

Q.3. List down equipment/assemblies/sub-assemblies that will from part of following activities of RAS/FAS:

(a) Delivery ship supplying liquid cargo.
(b) Delivery ship supplying solid cargo.
(c) Receiving ship receiving liquid cargo.
(d) Receiving ship receiving solid cargo.

Q.4. What are the various factors & features towards design of RAS/FAS System onboard delivery and receiving ships?

Q.5. How will the design of RAS/FAS System for delivery and receiving ship be undertaken?

Q.6. What type of rig will be used for delivery ship? Give specifications.

Q.7. What type of capstan will be used? Give specifications.

Q.8. What type of winches will be used? Give specifications.

Q.9. What type of hoses will be used? Give specifications.

Q.10. What type of probes and connections will be used?

Q.11. What will be the material used for each item of RAS/FAS system such as probe, hoses, rig, seamanship gear etc?

Q.12. What would be the load testing criteria and how will it be undertaken for every item of the system?

Q.13. What are the environmental and quality parameters followed?

Q.14. What are thevarious test, inspection and quality checks conducted while designing and manufacturing of the system and its components?

Q.15. How will the integration of system with ship's other systems such as fueling system, power supply etcbe achieved?

Q.16. What will be the various tests and inspection that will be undertaken during installation, setting to work and commissioning of system?

Q.17. What is the firm's past experience of dealing with RAS/FAS system for Naval ships with regards to supply, repair and maintenance?

Q.18. What are the infrastructure facilities available with the firm in-house for designing and manufacturing of RAS / FAS system for naval vessels?

Q.19. How will the forgoing/casting of item be undertaken? What is the experience of firm in this area?

Q.20. What will be the source for the material required for manufacturing of RAS/FAS items?