KHNP Supply Chain Management
for Poland Nuclear Industry Suppliers

60th International Scientific Welding Conference
Sosnowiec, Poland

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Victor KUM

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CONTENTS

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Basic Concept

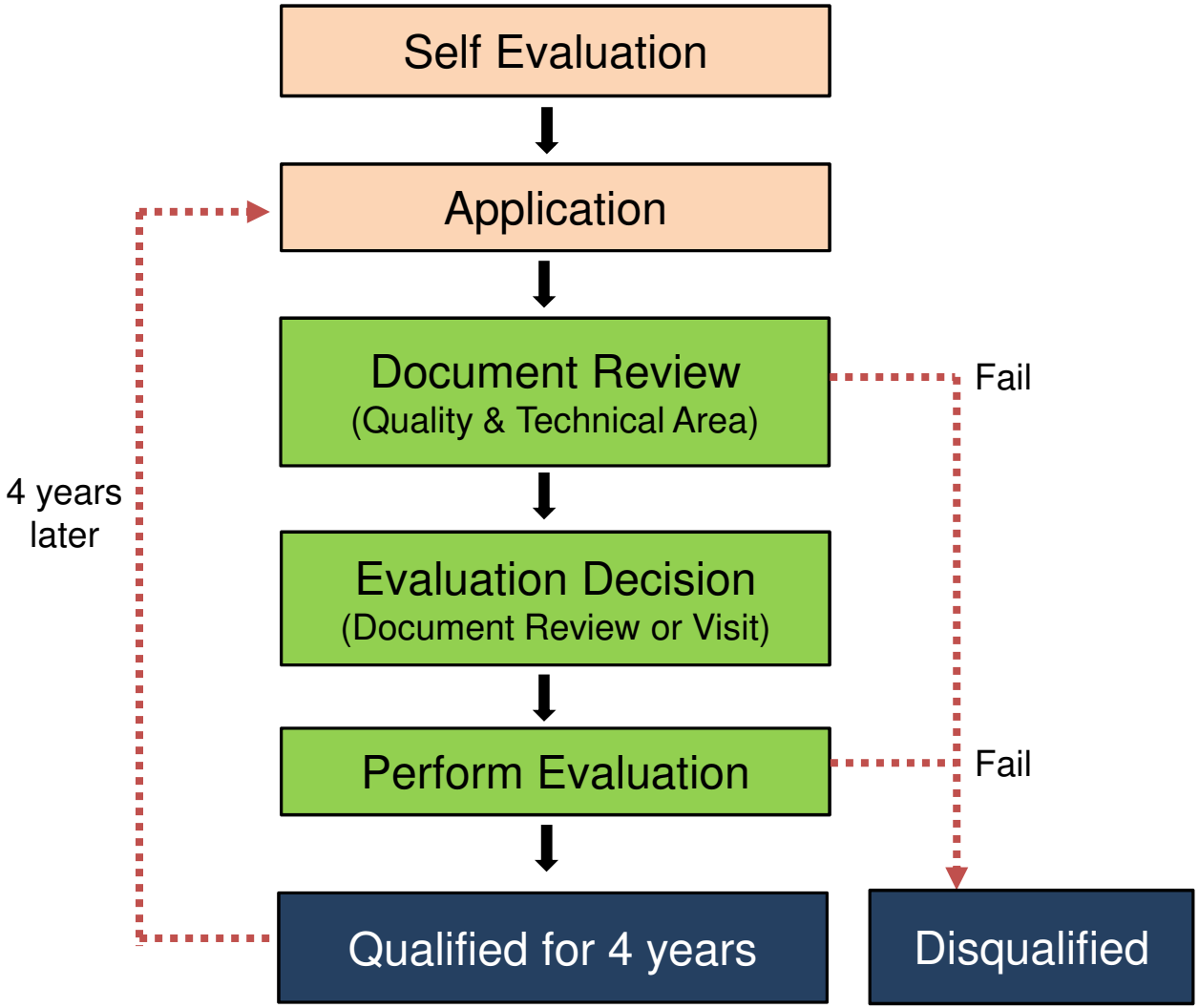
Category for suppliers

Category	Supply Area	Equipment
Major Equipment	Construction	RV, SG, RCP, TG, etc.
BOP	**Construction**	**Valve, Pump, Cable, etc.**
Spare Part	**Maintenance**	**Valve, Pump, Cable, etc.**

- ***KHNP works with more than 900 qualified suppliers (as of 2018)***

Qualification Process

Whole Qualification Process



Qualification Process

- **Self Evaluation**
- Application
- Document Review
- Method Decision
- Evaluation
- Qualified

Self Evaluation by Supplier

QA Manual Check List Q Class

(If necessary, Please refer ASME NQA-1(1994))

Name of Company :

QA manual approved date : **Rev. No :** **Document No :**

No.	Quality Assurance Requirement	Related Contents in the Quality Assurance Manual	Remarks
1	Organization		
2	Quality Assurance Program		
3	Design Control		
4	Procurement Document Control		
5	Instruction, Procedure, Drawing		
6	Document Control		
7	Control of Purchased Items and Services		
8	Identification and Control of Items		
9	Control of Processes		
10	Inspection		
11	Test Control		
12	Control of Measuring & Test Equipment		
13	Handling, Storage and Shipping		
14	Inspection, Test and Operating Status		
15	Control of Nonconforming Items		
16	Corrective Action		
17	Quality Assurance Records		
18	Audits		

Note. In the Remarks column, explain the reason why if you have not applied to requirement.

[양식번호 : 표준행정-9029B-6-1/4]

QA Manual Check List Q Class(Detail)

Quality Assurance Requirement(Detail)	Related Contents in the QA Manual	Remarks
1. Organization		
1) Responsibility for establishing, implementing and verifying of QA program		
2) Organizational structure, functional responsibilities and authorities		
3) Responsibility for audit, inspection		
4) Organizational freedom for quality organization (person)		
5) Report to a management level for activities affecting quality		
6) The external and internal interfaces between organizational units		
2. Quality Assurance Program		
1) Establishing and maintaining QA Program		
2) Scope of application		
3) Relationship between QA program and procedure		
4) Personal indoctrination and training		
5) Personal qualification for quality verification and special process		
6) Regular assessment for the adequacy of QA Program		
3. Design Control		
1) Identifying, approval and documentation for design input		
2) Design Process		
3) Design verification		
4) Change Control		
5) Interface control		
6) Documentation and records		
4. Procurement Document Control		
1) Content of the procurement documents (Scope of Work, Technical Requirements, QA Program Requirements, Right of Access, Documentation Requirements, Nonconformances, Spare and Replacement Parts)		
2) Procurement document review		
3) Procurement document changes		
5. Instruction, Procedure, Drawing		
1) Prescription of the activities affecting quality		
2) Quantitative or qualitative acceptance criteria		
6. Document Control		
1) Preparation, review, approval, and issuance		
2) Documented control system		
3) Document Change(major/minor)		

Note. In the Remarks column, explain the reason why if you have not applied to requirement

[양식번호 : 표준행정-9029B-6-2/4]

18 chapters based on ASME NQA-1

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Qualification Process

- Self Evaluation
- **Application**
- Document Review
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- Qualified

Application for Registration

APPLICATION FOR REGISTRATION
ON **KHNP'S** QUALIFIED SUPPLIERS' LIST

Unless otherwise required, please record only the matters related to the item for application.
Use of additional sheets is permitted, if necessary.

NEW ☐ CHANGE ☐ RENEWAL ☐

1. **APPLICANT'S NAME & ADDRESS**

Name of Company (full legal name)			Chief Executive Officer	
Address	Head Office	Zip Code:		TEL: FAX:
	Factory	Zip Code:		TEL: FAX:
	Factory	Zip Code:		TEL: FAX:
	Contact Person In Korea	Postal Code:		TEL: FAX:

2. **ITEM TO BE REGISTERED**

Item Description		Quality Class	
Field of KHNP Operation	Electrical Generation (Hydraulic ☐ Nuclear ☐ Common ☐ Telecommunications ☐ Electronic Data Processing System ☐ Other ☐ CGID ☐)		
Referenced Purchase Spec. No.			

3. **BUSINESS INFORMATION**

Type of Business	Design ☐ Manufacturing ☐ Assembly ☐ Distribution ☐ Other ☐(please explain)
Type of Company	Corporation ☐ Proprietorship☐ Other ☐(please explain)
Major Products (Please record percentage of your Total Sales Amount)	1. (%) 2. (%) 3. (%)

NOTE:

1. As per Korean Law, a Certificate of Taxpayer's Registration (for foreign applicants, an equivalent certificate) shall be attached to the application.
2. In the event that the applicant is a distributor, a notarized contract for exclusive Korean distribution rights with the manufacturer shall be attached hereto, along with any pertinent information on the manufacturer so as to enable us to assess his capabilities.
3. In the event that the applicant is a design company, information on the companies that manufacture major items, or assemble and test the system, shall be attached so as to enable us to assess their capabilities.

[양식번호 : 표준행정-9029B-4-1/9]

21. **LIST OF THE CERTIFICATES OF AUTHORIZATION FOR OFFICIAL STANDARDS AND/OR QUALITY ASSURANCE SYSTEMS**

Description	Authorizing Organization	Effective Period	Certified Items	Address of Certified Shop

Note: Copies of each certificate shall be attached hereto.

22. **STATUS OF APPROVAL, PERMIT, LICENSE, REGISTRATION, AND/OR REPORT UNDER THE LAW AND/OR ORDINANCES (Applicable only for Domestic Applicants)**

No.	Description	Date Acquired	Approving Organization	Remarks

Note: Copies of any related documents for identification purposes shall be attached hereto.

23. **STATUS OF ESTABLISHMENT OF A QUALITY ASSURANCE SYSTEM**

Has a QA System been established?	Yes ☐ No ☐	Date of Establishment	
Applied Code & Standards for QA System			
Have external audits for QA System been performed ? Yes ☐ No ☐	Auditing Organization	Audit Date	Remarks

Notes:

1. In the "Remarks" column, the reason for the audit shall be indicated.
2. The QA System (or Program) Manual in use shall be attached hereto.
3. KHNP's "QA Manual checklist" shall be attached hereto. (from KHNP's Form)

[양식번호 : 표준행정-9029B-4-8/9]

24 categories for supplier's information and capability

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Qualification Process

- Self Evaluation
- **Application**
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Application for Registration

K-PRO (KHNP Procurement System) – http://ebiz.khnp.co.kr

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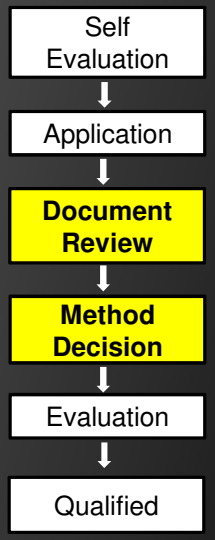
Qualification Process



Document Review – Two aspect

KHNP HQs have document review with two evaluation areas

1. *Quality area* : Based on ASME NQA-1 (18 chapters)
2. *Technical area* : Design, Manufacture, Test, Contract Mgt.

Responsible departments perform supplier evaluation

1. *Visit factory* : major cases
2. *Document review* : same supply experiences in 3 years

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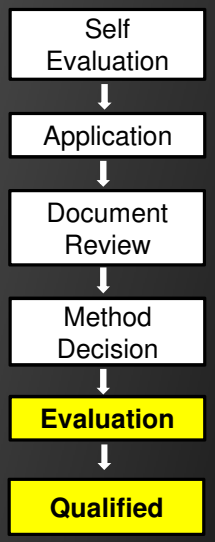
Qualification Process



Quality & Technical Areas

Quality Class	Qualified	Disqualified
Q	1. Score : Higher than 80 2. No unsatisfactory case among critical question(*)	1. Score : Lower than 80 2. More than one(1) unsatisfactory case
A(T,R)	1. Score : Higher than 70 (Technical : Higher than 75) 2. No unsatisfactory case among critical question	1. Score : Lower than 70 (Technical : Lower than 75) 2. More than one(1) unsatisfactory case

Though ISO9001 is different from ASME NQA-1, it can be adjusted through minor modification

KHNP to review the possibility for changing evaluation criteria to incorporate the European Code & Standard.

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Future Cooperation

Dziękuję !