

UR E27 (Ch.4 Part X)

Approval process

ClassNK Machinery Department
Machinery Automation Section



First, we explain the scope of UR E27.
The CBSs are applied as follows.

CBS in scope

- Propulsion
 - Steering
 - Anchoring and mooring
 - Electrical power generation and distribution
 - Fire detection and extinguishing systems
 - Bilge and ballast systems, loading computer
 - Watertight integrity and flooding detection
 - Lighting
- Any required safety system whose disruption or functional impairing may pose risks to ship operations
 - Navigational systems required by statutory regulations
 - Internal and external communication systems required by class rules and statutory regulations

The scope of UR E27 is different from those of UR E22. Please note that some products are only covered by UR E27.



Next, we explain the scope of vessels as follows.

Vessel in scope

Ships contracted for construction on or after **1st July 2024**

- Passenger ships (including passenger high-speed craft) engaged in international voyages
- **Cargo ships of 500 GT and upwards engaged in international voyages**
- High-speed craft of 500 GT and upwards engaged in international voyages
- Mobile offshore drilling units of 500 GT and upwards
- Self-propelled mobile offshore units engaged in construction (ie wind turbine installation maintenance and repair, crane units, drilling tenders, accommodation, etc)

Vessel out of scope

- Cargo ships that are not engaged in international voyages
- New / Existing ships contracted for construction by 1st July 2024



There are two approval processes.

Type of the approval process

Approval type	Description
I. Type approval	This refers to approval for the product type . Part of the process required for individual product approval is eliminated by conducting the examinations and inspections of representative models specified in Chapter 4, Part X (UR E27) before it is prepared to be installed on board a ship.
II. Individual product approval	This refers to approval for individual products for installation on E26 vessels . Chapter 4, Part X (UR E27) applies to CBS installed on applicable ships, and approval is required for each product.

Obtaining Type Approval may allow for **the omission of certain document submissions and witness surveys in the individual product approval process.**

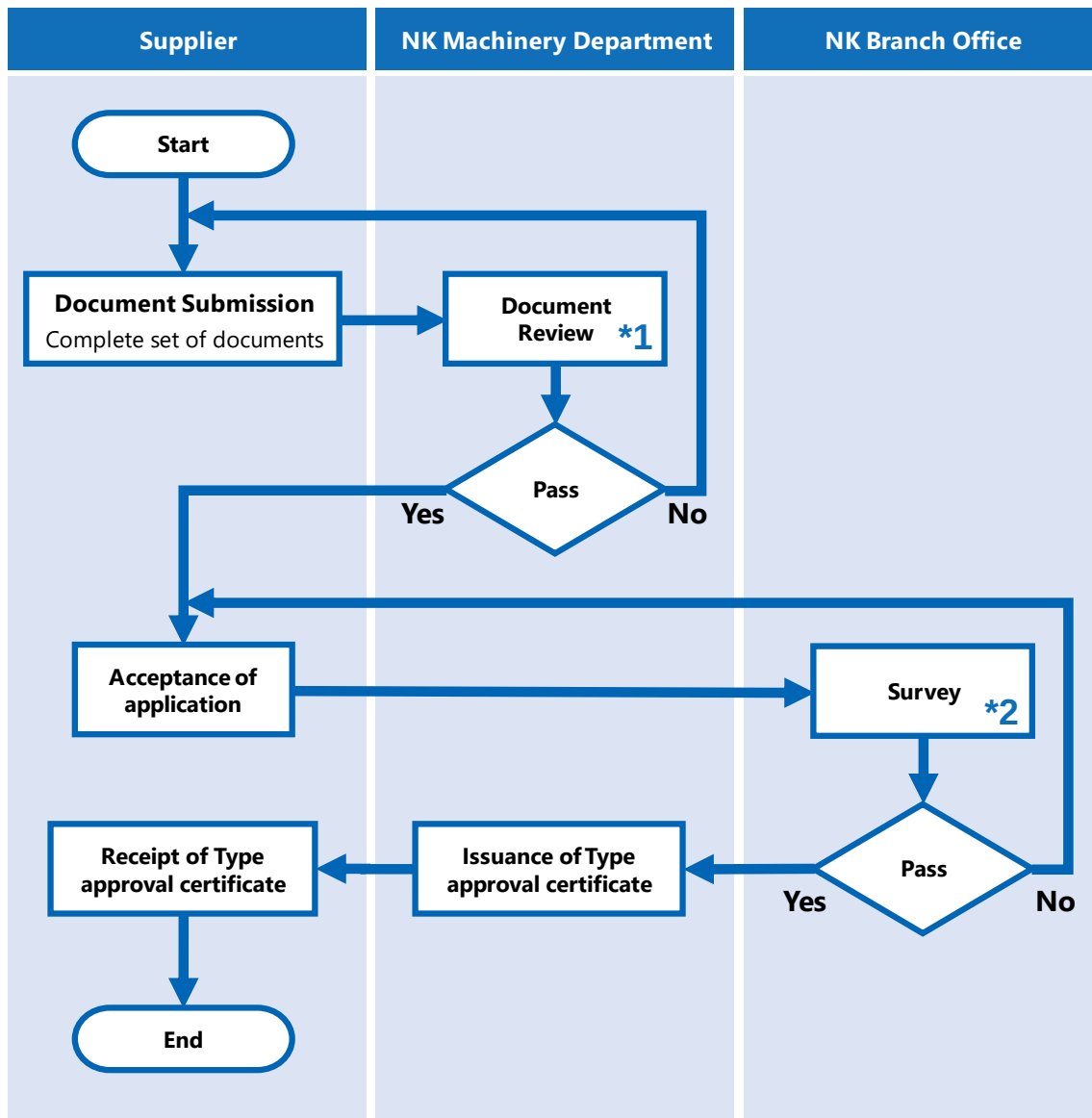
Type Approval, which is certified for five years, allows for the omission of the individual product approval process.

Type approval process

Type approval process	Description
Initial approval	Conducted when type approval is to be newly obtained for the CBS.
Renewal of approval	Conducted when renewing the expiration date of a CBS which is type approved. The validity period of the type approval is five years, and this test is to be conducted when renewal of the validity period is desired.
Changes to approved CBS	Conducted when a CBS which is type approved is changed or modified in some way.

I. Type approval process

 Flowchart for Approval test of type approval process



For initial type approval, 9 documents and witness surveys are required.

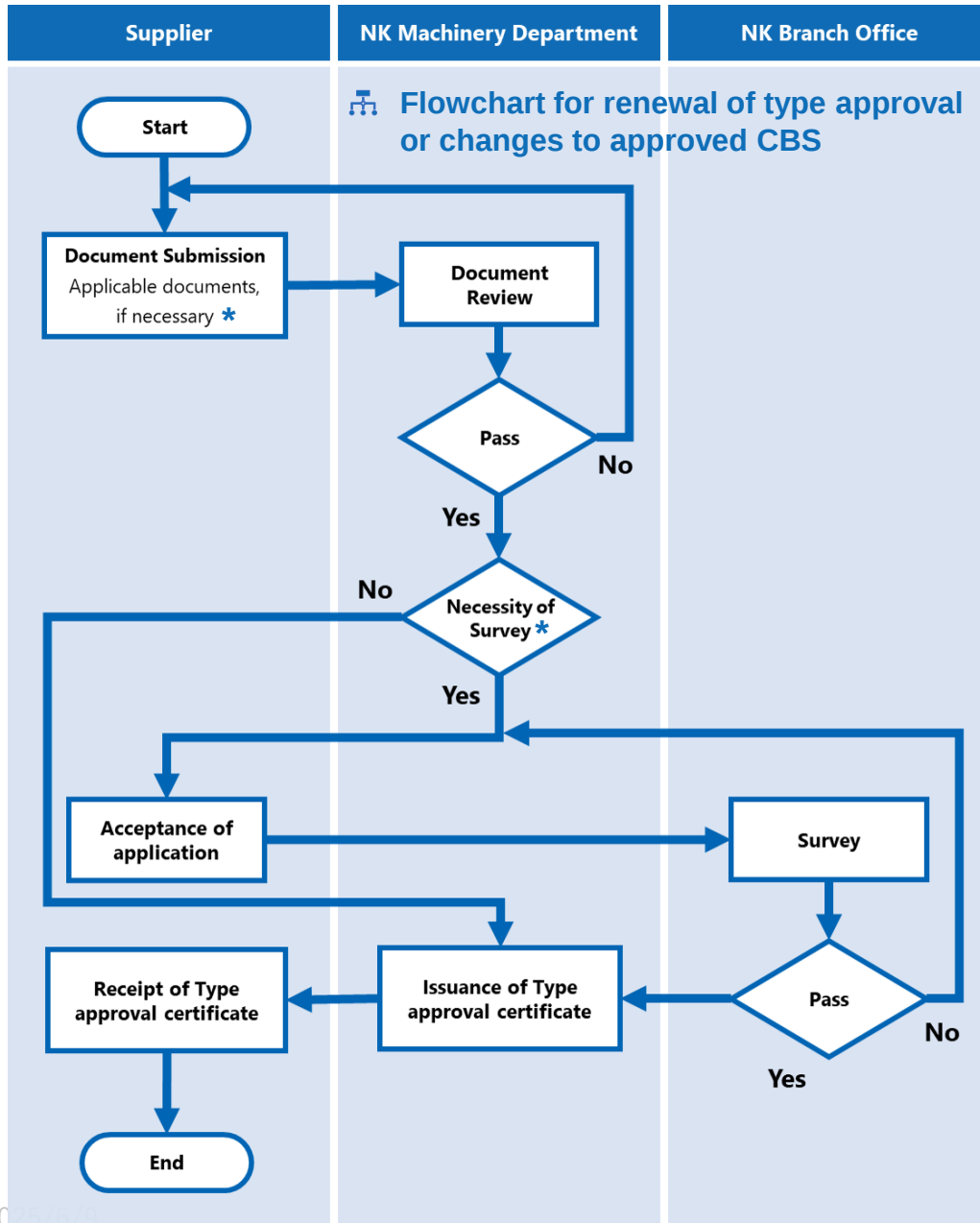
*1 Document List

- | | |
|--|---|
| <ul style="list-style-type: none">- CBS asset inventory- Topology diagrams- Description of Security capabilities- Test procedure of security capabilities- Security configuration guidelines | <ul style="list-style-type: none">- Secure development lifecycle documents- Plans for maintenance and verification of the CBS- Information supporting the owner's incident response and recovery plan- Management of change plan |
|--|---|

*2 Survey List

- | | |
|--|---|
| <ul style="list-style-type: none">- General survey items- Test of security capabilities | <ul style="list-style-type: none">- Correct configuration of security capabilities- Secure development lifecycle |
|--|---|

I. Type approval process: Renewal / Change



Document review and witness survey will be conducted as necessary for the renewal of type approval or changes to approved CBS.

Type approval process	Description
Renewal of approval	Conducted when renewing the expiration date of a CBS, which is type approved. The validity period of the type approval is five years, and this test is to be conducted when renewal of the validity period is desired.
Changes to approved CBS	Conducted when a CBS which is type approved is changed or modified in some way.

* If the rules have changed since the last issue, or if the CBS has changed, Document submission / Witness survey is required depending on the changes.

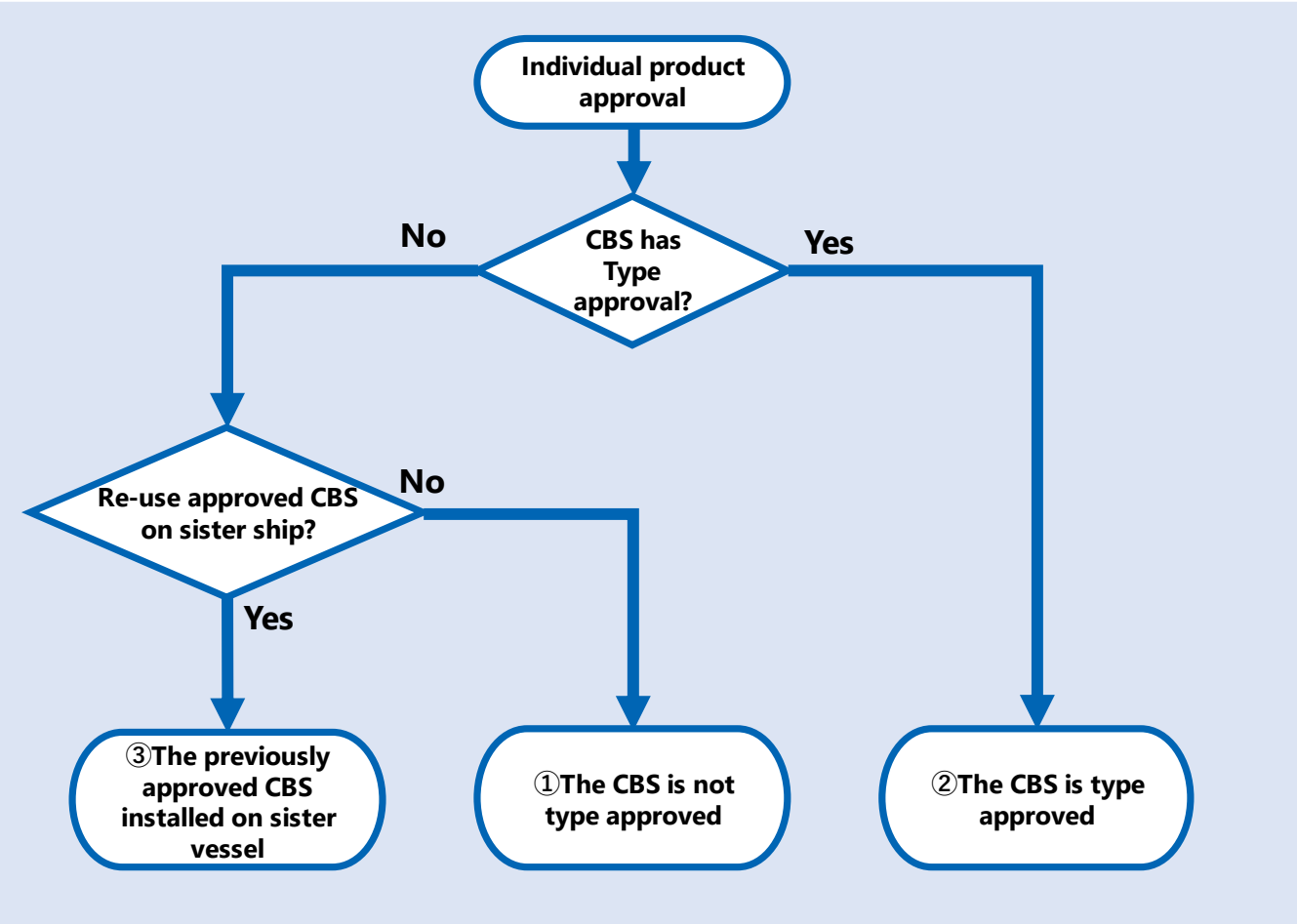
The approval process for an individual product differs based on its status, such as whether it has Type Approval or a record of approval as an identical system on a sister vessel. **An overview of the approval process is as follows:**

Individual product approval process

Individual product approval process	Description
①The CBS is not type approved	In principle, all documentation and witness surveys are required.
②The CBS is type approved	The submission of some documents may be omitted. Furthermore, witness surveys may be omitted, provided that a test report from the supplier is submitted.
③Previously approved CBS installed on sister vessel	After comparing and examining any differences with the previously approved CBS, some or all documentation may be re-used.

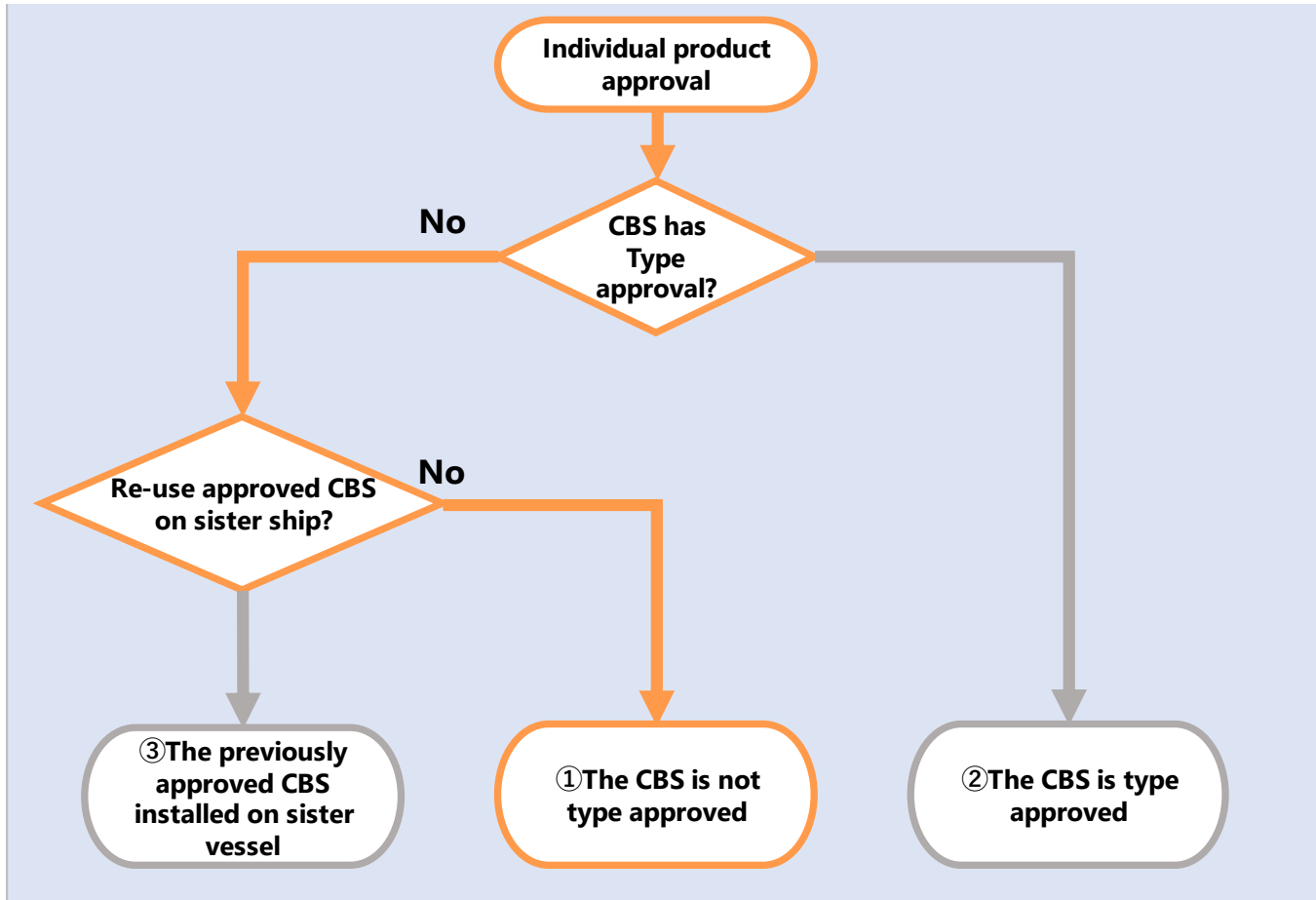
Flowchart of Individual product approval processes is as follows:

 **Flowchart of Individual product approval process**



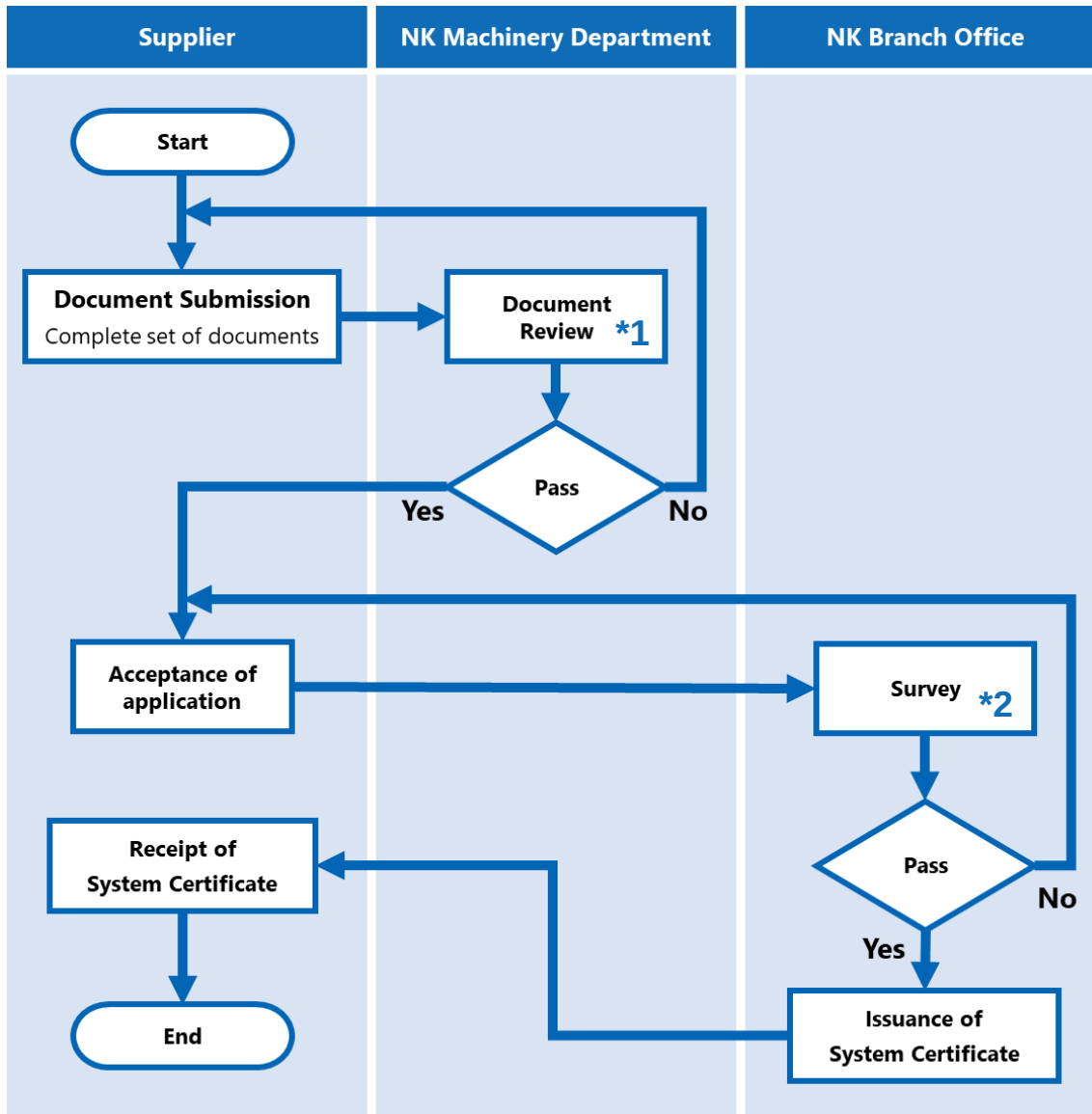
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Flowchart of Individual product approval process



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 Flowchart for the products that are not type approved



If the CBS is not type approved, 9 documents and witness surveys are required.

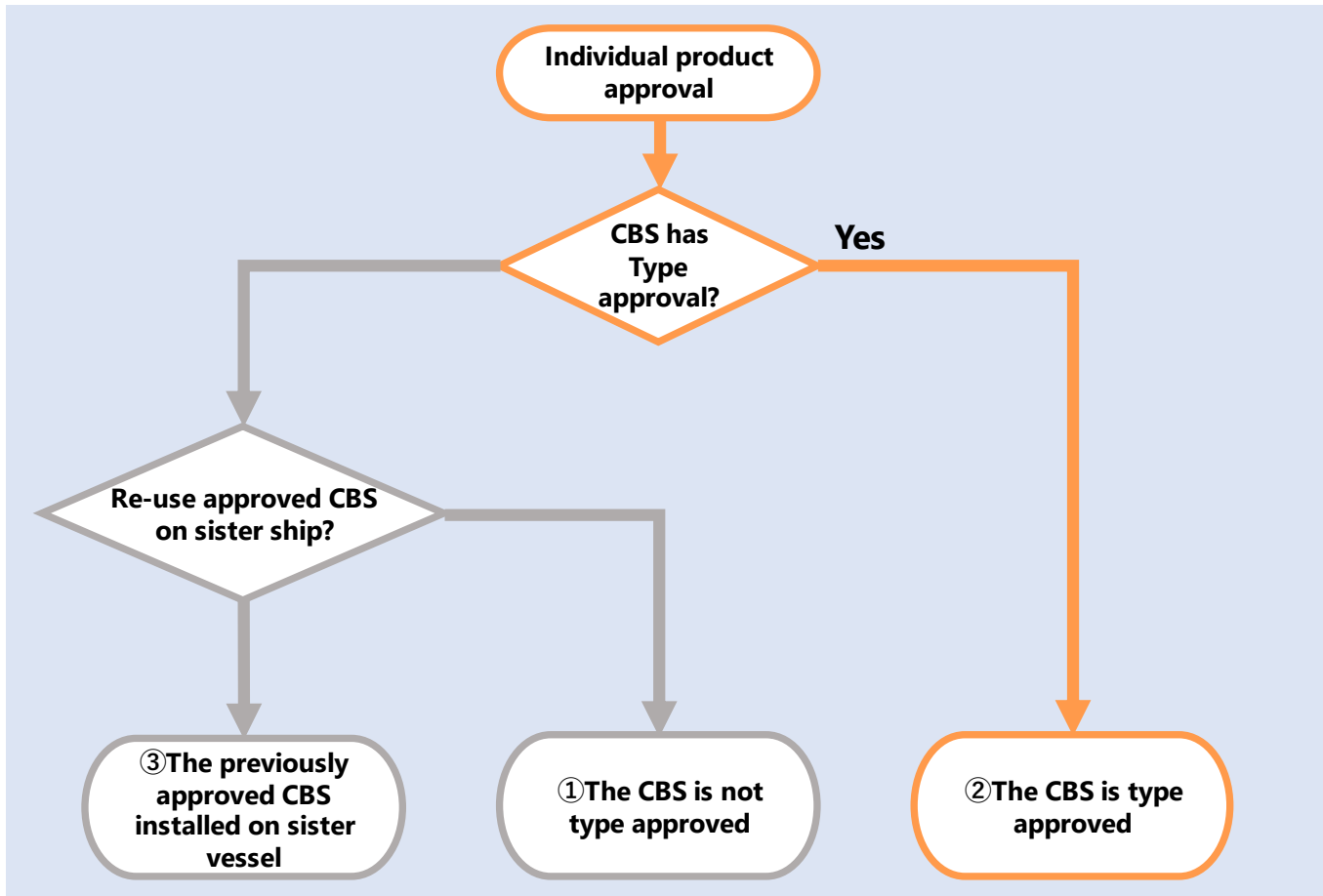
*1 Document List

- | | |
|--|--|
| <ul style="list-style-type: none"> - CBS asset inventory - Topology diagrams - Description of Security capabilities - Test procedure of security capabilities - Security configuration guidelines | <ul style="list-style-type: none"> - Secure development lifecycle documents - Plans for maintenance and verification of the CBS - Information supporting the owner's incident response and recovery plan - Management of change plan |
|--|--|

*2 Survey List

- | | |
|---|--|
| <ul style="list-style-type: none"> - General survey items - Test of security capabilities | <ul style="list-style-type: none"> - Correct configuration of security capabilities - Secure development lifecycle |
|---|--|

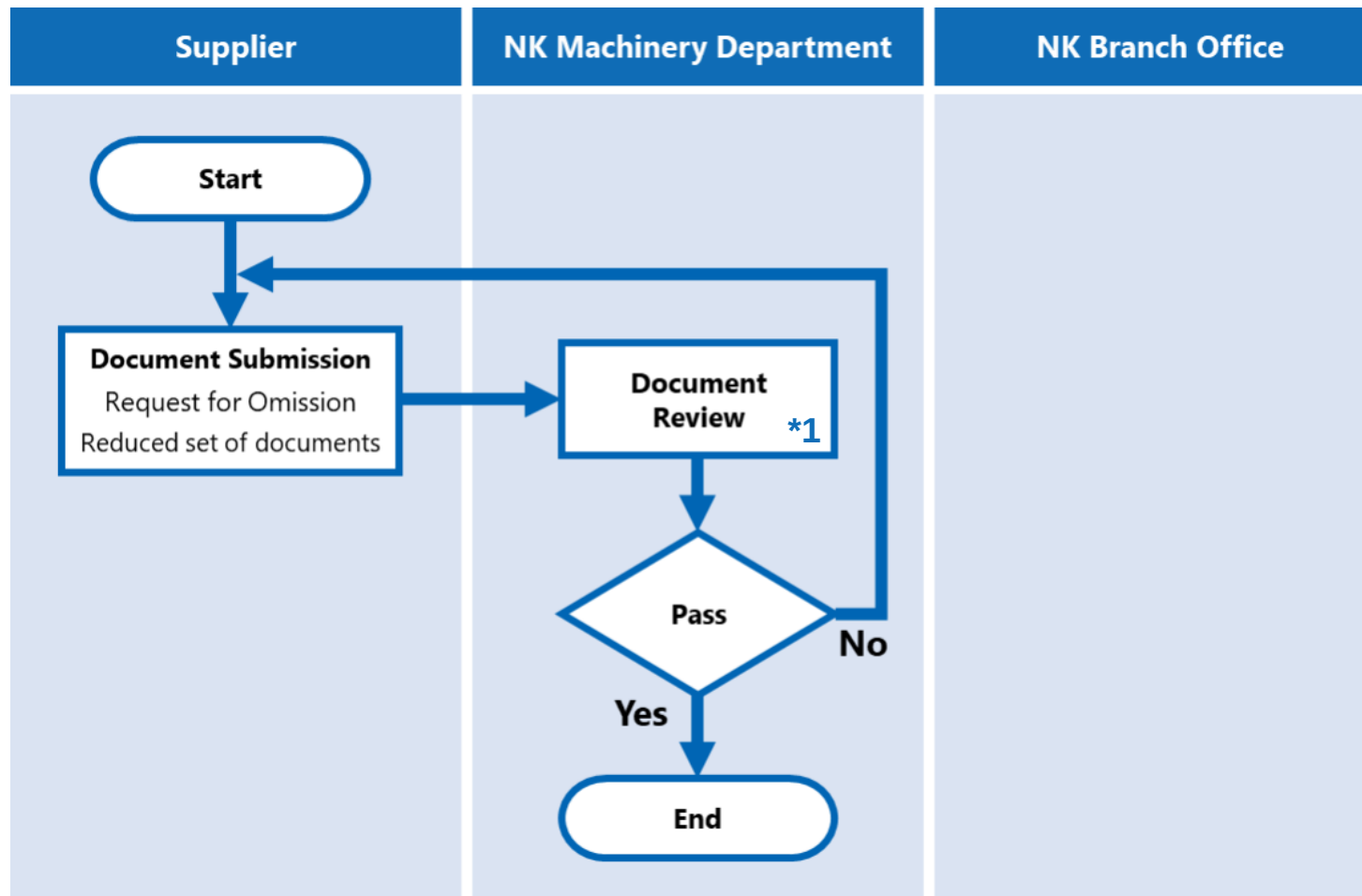
Flowchart of Individual product approval process



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③Previously approved CBS installed on sister vessel	After comparing and examining any differences with the previously approved CBS, some or all documentation may be re-used.

If the CBS has our type approval, some documents and witness surveys may be omitted.

Flowchart for the CBS that are type approved



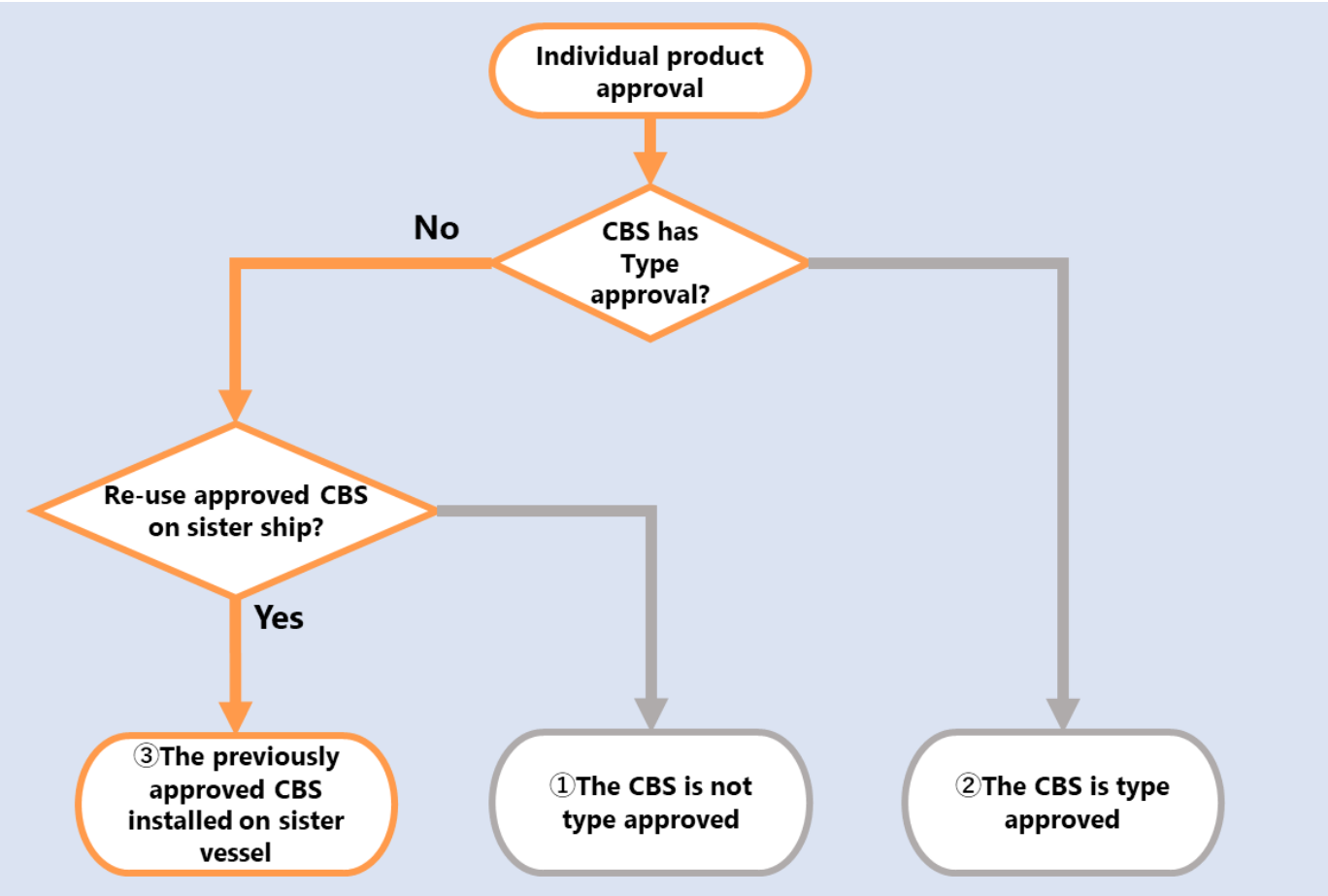
*1 Document List

- CBS asset inventory
- Topology diagrams
- Test reports
- Application for exemption from submission of documents based on the type approval *2

*2 Applications for exemption from submission of documents based on type approval

- Copy of the type approval certificate
- List of any differences from the type approved product

🏗️ Flowchart of Individual product approval process

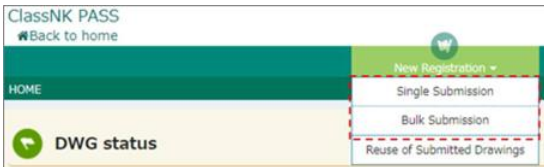


Individual product approval process	Description
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②The CBS is type approved	The submission of some documents may be omitted. Furthermore, witness surveys may be omitted, provided that a test report from the supplier is submitted.
③Previously approved CBS installed on sister vessel	After comparing and examining any differences with the previously approved CBS, some or all documentation may be re-used.

To re-use the same drawings for other vessels, please use the “NK-PASS” system and follow the procedure outlined below.

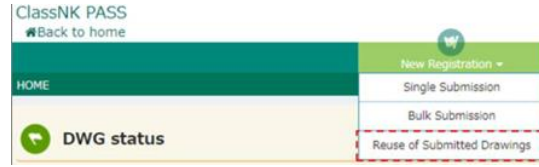
※For details, please refer to 3.7 of the NK-PASS operation manual.

 Reusing on the drawing submission screen

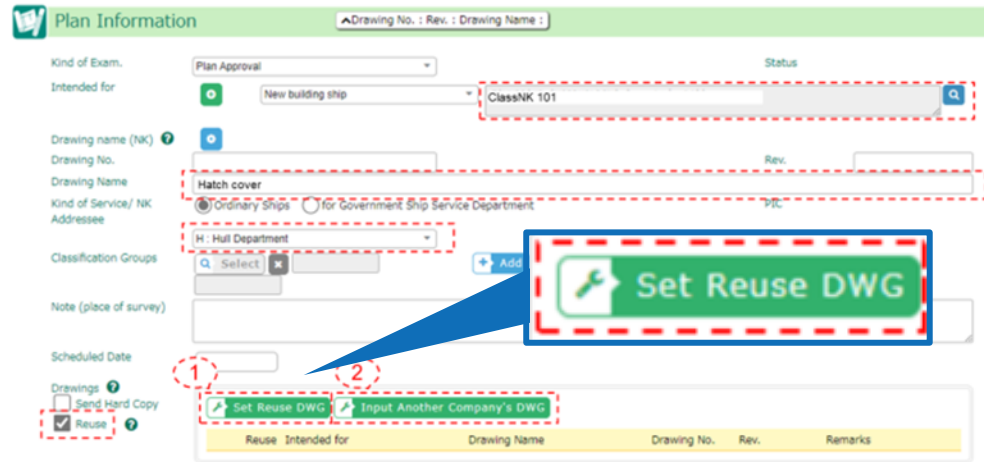
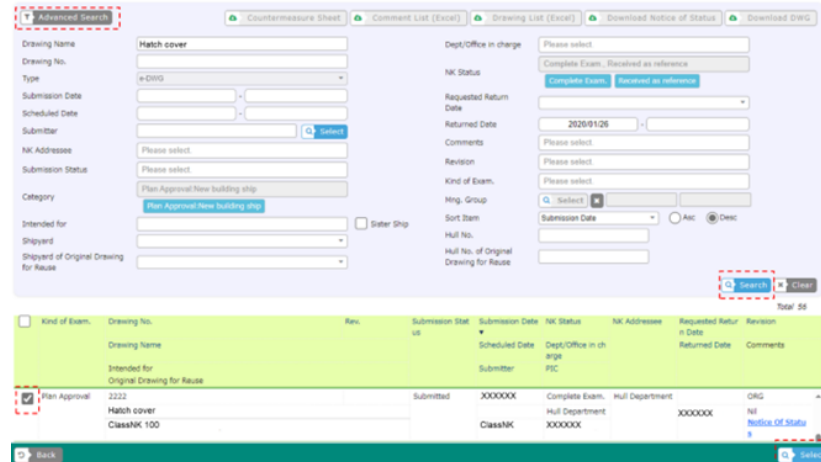


Set reuse DWG on the drawing submission Screen.

 Submission by the “Reuse of Submitted Drawings” screen



Submission by the “Reuse of Submitted Drawings” screen is also possible

THANK YOU

for your kind attention