

API Upstream Standard Development - Supply Chain Management

Rick Faircloth –Chairman SC20

SC20 Supply Chain Management

API SC20 Meeting is scheduled for Thursday (8:30-12:00 AM)

If you have a new subject you would like to be considered for a standard, please attend

History of API standards Development

- API formed in 1919 as a national trade association
- Standards Program organized in 1923, first standard published in 1924 were on pipe sizes, threads and couplings
- API now publishes 700+ standards covering all industry segments

History of API standards Development

- API Standards are:
 - Core of Institute's technical authority
 - Represent proven engineering practices and are used in worldwide operations
 - Incorporated by State, Federal and International Regulators
- API is accredited by the American National Standards Institute

Drivers for Oil & Gas Industry Supply Chain Standards

Ongoing industry issues with materials and processes deemed critical to the safety and reliability of products used in the Oil and Gas industry.

Increasingly global supply chain with limited history with oil and gas standards and best practices.

Increasing requirements for local content and sustainable development initiatives including regulatory compliance.

Goals of Supply Chain Standards

Institutionalize best practices for supplier review and qualification.

Harmonize component and process qualification requirements.

Establish scalable requirements to address various levels of criticality and risk.

Allow suppliers, product manufacturers and end users access to the industry's licensing and registration program – the API Monogram Program.

Goals of Supply Chain Standards

Some of API 20 Series requirements are being considered as a mandatory by applicable API product specifications. Below are the specifications that are being considered.

- API 6A – 21st Ed. revision in process (20A-20E/20F)
- API 6DSS -3rd Ed. published August 2017(20A-20E/20F)
- API 6D - 25th Ed. revision in process (20A-20E/20F)
- API 16A – 14th Ed. published April 2017(20E/20F)

Using API Supply Chain Standards

Voluntary licensing and use by the supplier.

- Casting, Forging and bolting supplier can apply for an API Monogram license for Specification API 20A, or 20B or 20C or 20E or 20F.
- Based on the successful audit of their quality management system to API Q1 and of their facility's compliance with the 20A or 20B or 20C or 20E or 20F requirements the facility will be issued an API Monogram license to mark product.

Using API Supply Chain Standards – cont.

Use by the purchaser (OEM):

- Manufacturers may require licensing and/or just compliance with API Specification 20A, 20B, 20C, 20E or 20F, etc. as a contractual requirement on material supplied.

Using API Supply Chain Standards – cont.

Use by the end-user:

- End-users may require that manufacturers equipment be produced from API Specification 20A, 20B, 20C, 20E or 20F, etc. compliant components.

API SC20 Specifications and Standards

Specification document in SC20 are specific for product such as (castings, forgings, bolting).

Standard document in SC20 address qualification of manufacturer ,service or process such as (NDE, Heat treatment, Welding, Distributors of Metallic Material, Polymeric Seals, Plating and Coating services, Subsurface Electronic equipment

API 20: Supply Chain Standards issued -status

- **Specification 20A:** Castings for use in the Petroleum and Natural Gas Industry. 2nd Edition Published August 2017.
- **Specification 20B:** Open Die Forgings for use in the Petroleum and Natural Gas Industry. 1st Edition published April 2013.
- **Specification 20C:** Closed Die Forgings for use in the Petroleum and Natural Gas Industry. 2nd edition published November 2015.

API 20: Supply Chain Standards issued -status – cont.

Standard 20D: Nondestructive Examination Services for Equipment Used in the Petroleum and Natural Gas Industry. 1st Edition Published September 2013.

Specification 20E: Specification for Low Alloy Steel Bolting for Pressure Containing Gas Equipment - 2nd Edition Published 2017.

Specification 20F: Corrosion Resistant Bolting for Use in the Petroleum and Natural Gas Industries - 2nd Edition Published May 2018.

API 20: Supply Chain Standards issued -status – cont.

Standard 20G: Qualification of Welding Suppliers for Equipment Used in the Petroleum and Natural Gas Industry .1st Under development planned publication late 2018 or early 2019.

Standard 20H: Heat treat services (Batch Type for Equipment Used in the Petroleum and Natural Gas Industry. 1st Edition publication October 2015.

Standard 20J: Qualification of Distributors of Metallic Materials for use in the Petroleum and Natural Gas Industry. 1st Edition published May 2017.

API 20: Supply Chain Standards issued -status – cont.

- **Standard 20L:** Qualification of Polymeric Seal Manufacturers for Use in the Petroleum and Natural Gas Industry. 1st Edition Published April 2018.
- **Standard 20M:** Qualification of Suppliers of Machining Services for Use in the Petroleum and Natural Gas Industry. 1st Edition Published October 2017.

API 20: Supply Chain Standards issued -status – cont.

Standard 20N: Heat Treatment Services - Continuous Furnaces for Equipment Used in the Petroleum and Natural Gas Industry. 1st Edition Under development- planned publication late 2018.

Standard 20P: Qualification of Suppliers providing Plating and Coating Services for Equipment used in the Petroleum and Natural Gas Industry. Under development- 1st edition – Planned publication late 2018 or early 2019.

API 20: Supply Chain Standards issued -status – cont.

Standard 20R: Qualification of Suppliers providing Subsurface Electronic Equipment used in the Petroleum and Natural Gas Industry. Under development- 1st edition –Planned publication 2019.

API 20: Supply Chain Standards Licensed Monogram -status

Currently there are several Licensee's and application as of 6-5-18

API Doc. NO.	Edition	Next Due	Title	Monogram Licenses			
				Active	Applications	Withdrawn	Cancelled
20A	2 nd Aug. 2017	3 rd - 2022	Castings	7	0	3	2
20B	1 st Apr. 2013	2 nd -2018	Open –Die Forgings	31	2	9	5
20C	2 nd Nov. 2015	3 rd -2020	Close-Die Forgings	14	5	5	2
20E	2 nd Feb. 2017	3 rd -2022	Carbon & Ally Steel Bolting	28	8	10	2
20F	2 nd Jun 2018	3 rd -2023	CRA Bolting	14	4	2	0

Questions

Sample Language for API Product Specifications

Provide Awareness

- API (20A, 20B, 20C, 20E, or 20F) contains requirements for supplier qualification and production of castings, forgings and bolting.

Sample Language for API Product Specifications

Provide Recommendation

- API standards (20A, 20B, 20C, 20E, or 20F) should recommend that suppliers be compliant to these standards.

Sample Language for API Product Specifications

Provide Requirement

- API standards (20A, 20B, 20C, 20E, or 20F) shall require that suppliers be full conformance to these standards.

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