

JIP33 : Engineering Specifications for the Procurement of Water Mist Systems for the oil & gas sector.

29th April 2021

Mark Davies – HAAR Technology for IOGP



Agenda



Introduction to IOGP JIP33



S-719 the water mist project



Digitalization

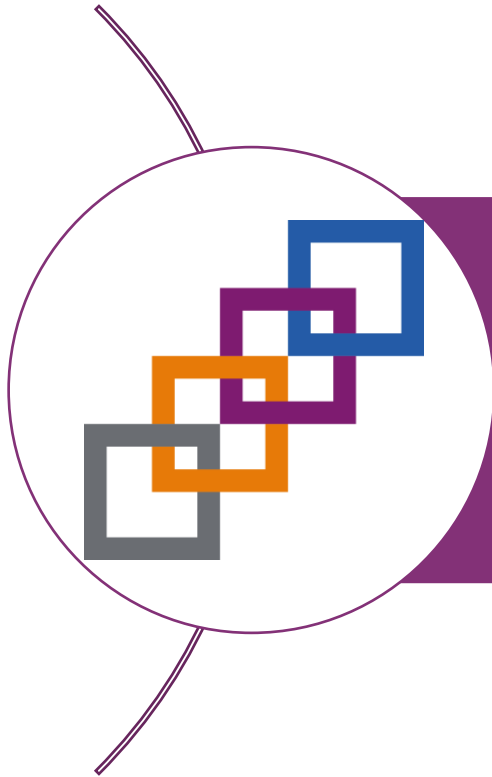


Case study



What happens next?





What is JIP33?



Realising value with JIP33 – the key principles

Initiated by the IOGP and endorsed by the World Economic Forum, Joint Industry Programme (JIP)33 creates standardized procurement specifications:

- A set of requirements that meet **essential needs** that can be used and reused - leading to **standardized production processes, smaller inventories** and **shorter lead times**.
- Users still have some **options and choices**. They don't need to make changes or add supplementary requirements.
- Industry-wide adoption means repeatability for suppliers, leading to **improved efficiency** and **reduced risk of cost and schedule overruns**.



JIP33 adds value by making the supply chain faster and more efficient



JIP33 in numbers

- **12 committed sponsors**



- **>20** Working Groups delivering new & upgrading existing specs, working with SDO's
- **>300 Subject matter experts** sharing knowledge, insights and expertise

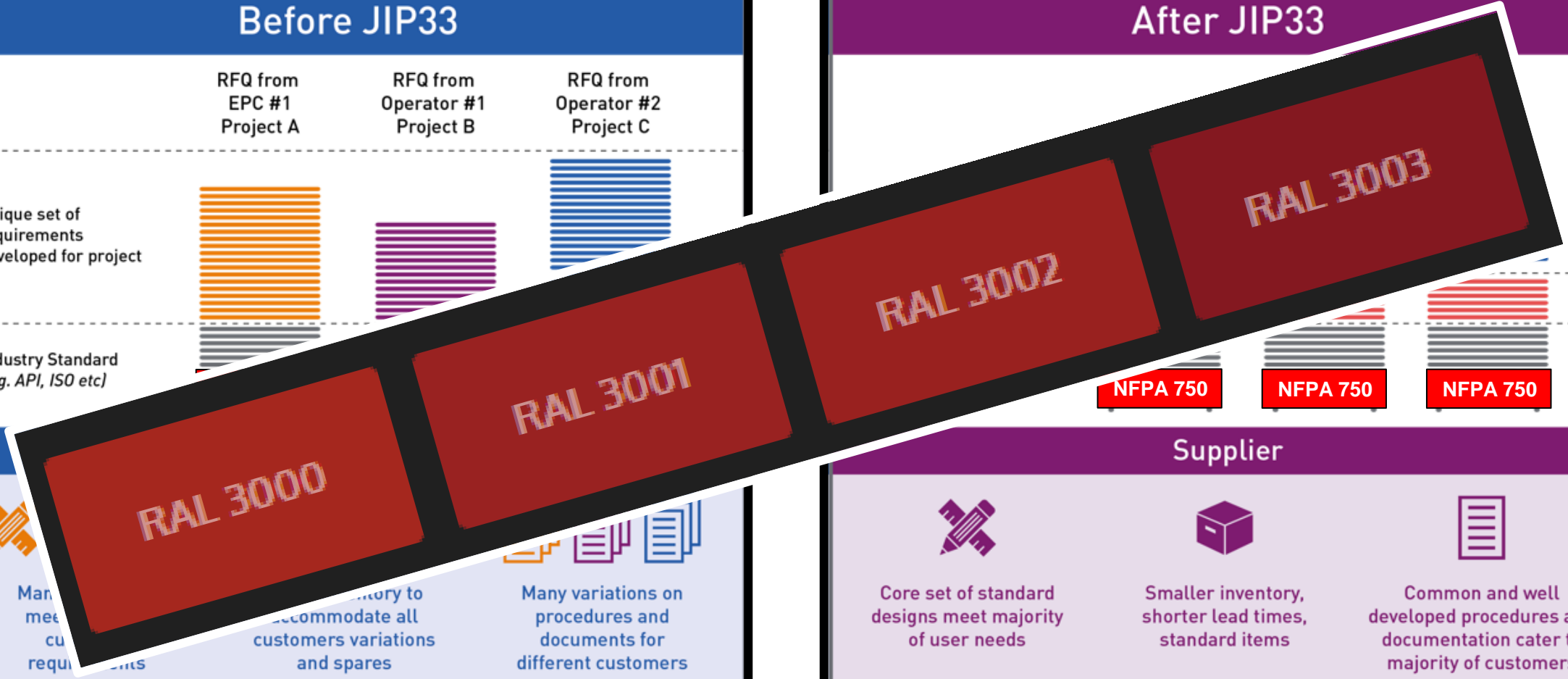
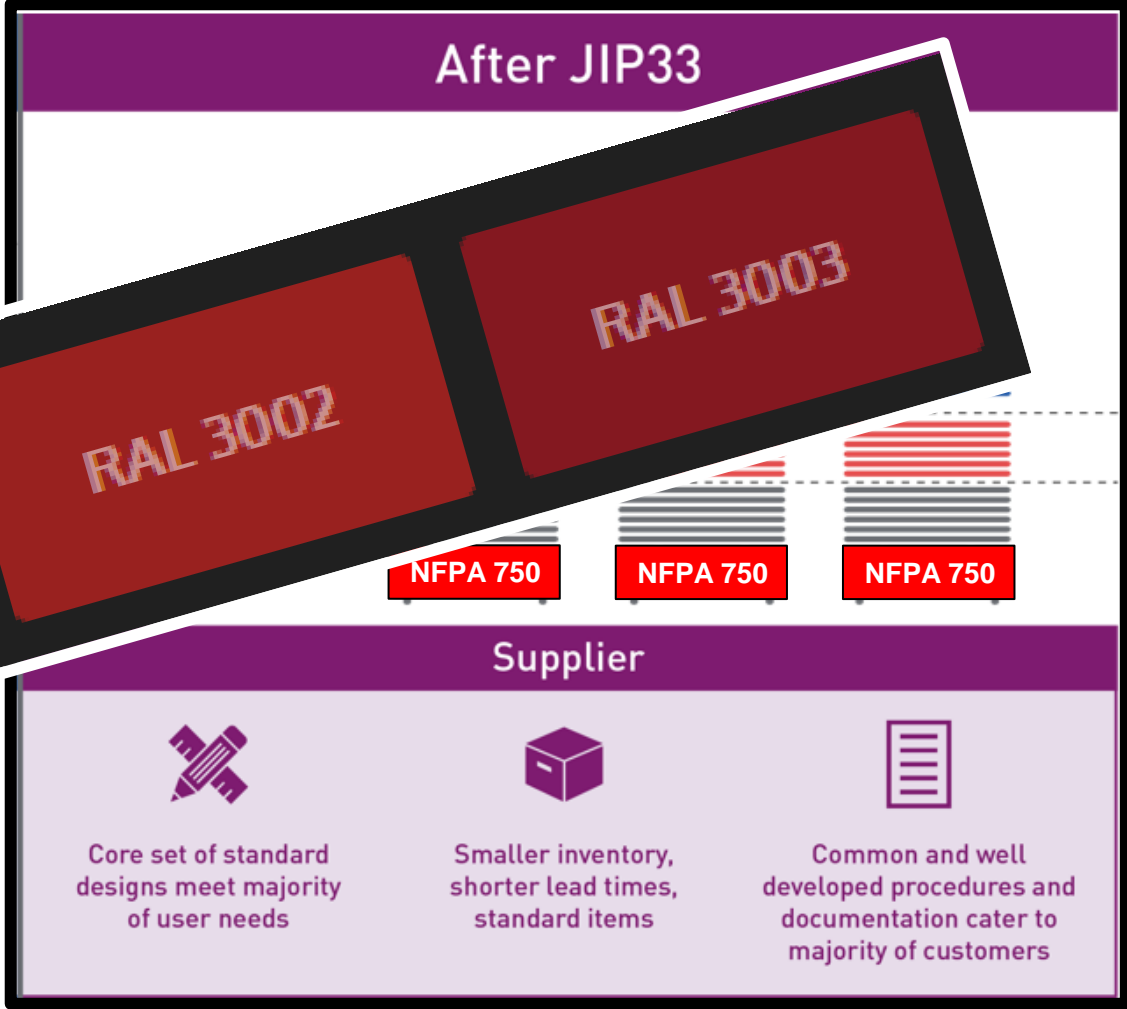
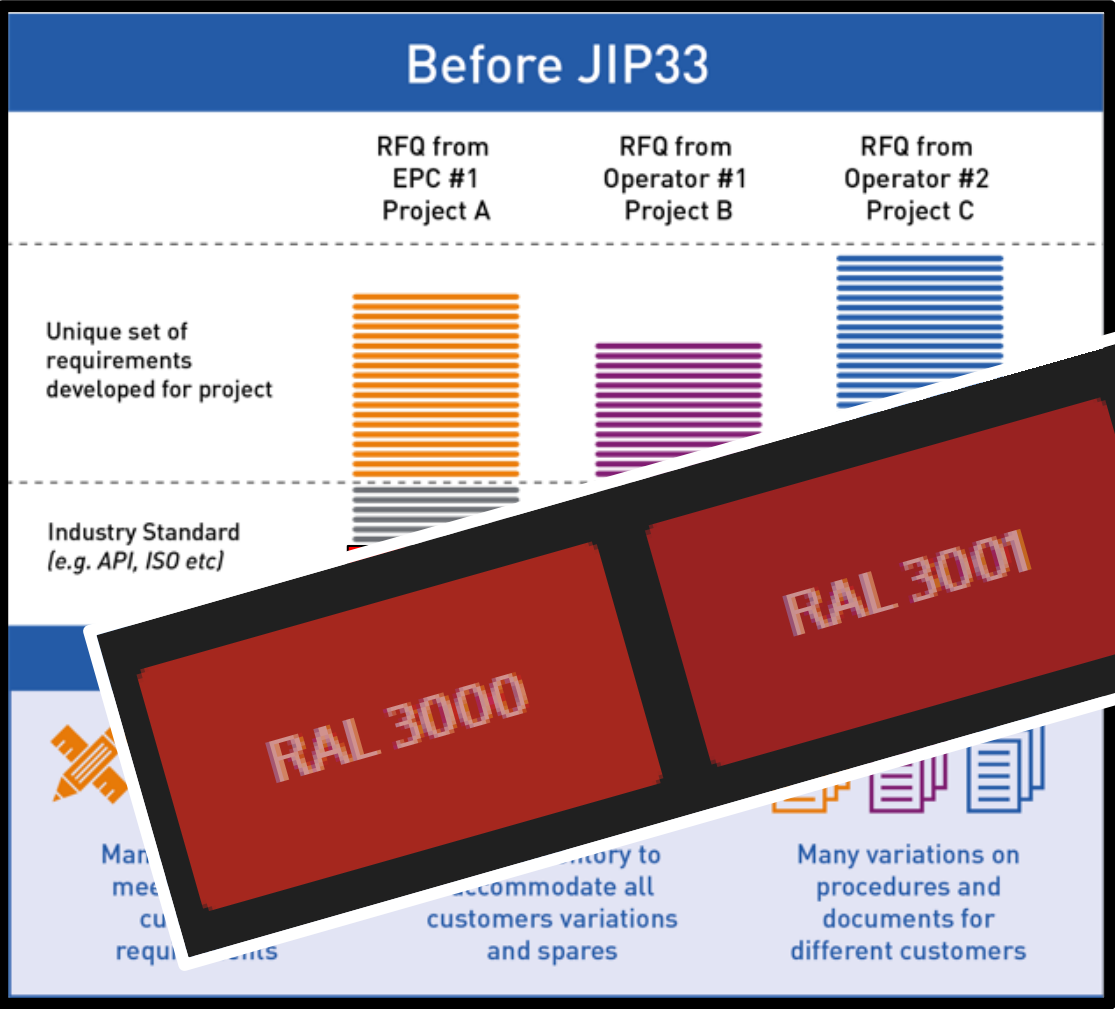
- **>40** specifications published
- More than **39,000** downloads since early 2018
- JIP33 Delivery Centres in London & Houston
- Continued progress despite COVID-19

NEW in 2020/21:

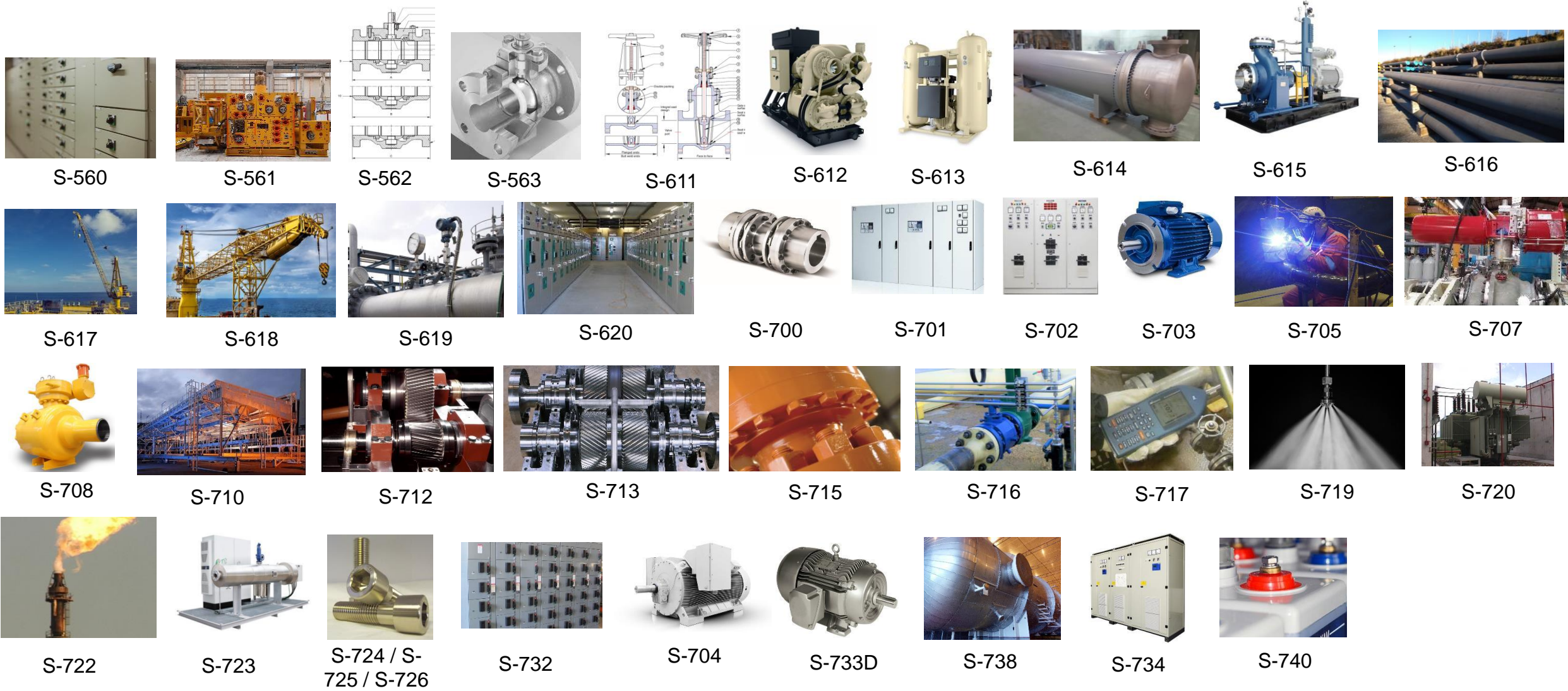
- 12 EPC Partners - Contractor Group
- Supplier Case Studies



The water mist suppliers perspective



Published specifications



All JIP33 specifications are FREE to download and available for use by everyone.

The more the JIP33 specifications are adopted, the more opportunities there are for efficiencies in our industry.





S-719 - the water mist project

Collaboration across the supply chain



*Evaluated > 18 water mist suppliers.
- based on listings and approvals.*

Reached out to 12, 6 actively engaged.

...Reliance is placed on the procurement and installation of listed water mist equipment or systems that have demonstrated performance in fire tests as part of a listing process.

* Taken from NFPA 750 1.1 scope



Framing - Work group from the 12 operators.

All pressures	1	Executive summary	3
Listed/approved /fire engineered	2	Scope of specification package	3
	2.1	Scope	3
	2.2	Boundaries	4
	2.3	Exclusions	4
	3	Value drivers	5
	3.1	Benefits	5
	3.2	Issues	5
	4	Specification interdependency	6
	4.1	General requirements	6
Supporting JIP33 specs	4.2	Supporting specifications	6
	4.3	Interface to equipment specifications	6
	5	Parent standard	7
	5.1	Possible standards	7
	5.2	Chosen parent standard	7
	5.3	Supporting Industry standards	7
NFPA 750	6	Stakeholders	7
	6.1	Internal stakeholders	7
	6.2	External stakeholders	8
12 suppliers contacted	7	Opportunities and threats	9
	7.1	Risk assessment	9
	8	Schedule and deliverables	9
	Annex A	Schedule and key dates	10
	Annex B	Work group members	11

Blast protection

Standardization

Design resources

Interventions

Fire engineered

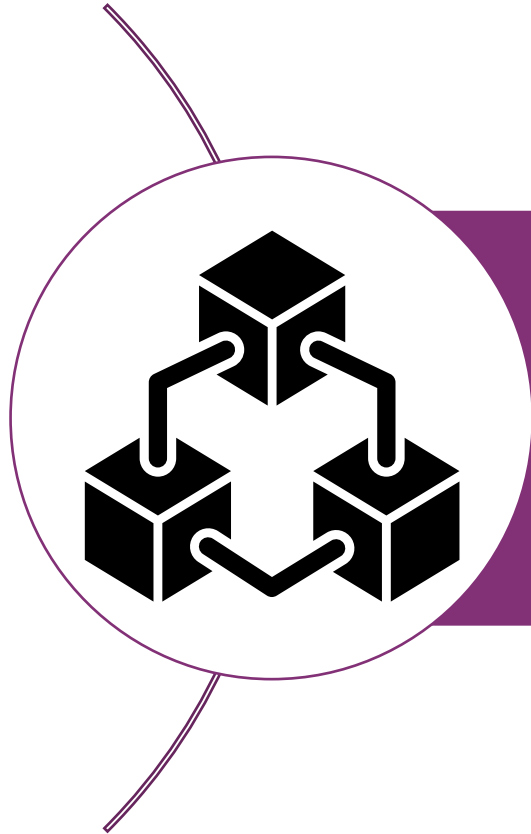
CEN pr EN 14972

Volumes/fuel loads

FM, IMO, UL, VDS, BS etc

Experience, knowledge, CEN, suppliers...





Digitization

Digitization - Jama

The screenshot displays the Jama software interface for a project titled "S-719 (ES20) - Water Mist Fire Protection". The interface includes a navigation menu at the top with options like "STREAM", "PROJECTS", "REVIEWS", and "ADMIN". A search bar and user information are visible in the top right corner.

On the left side, there is a project tree with a purple circle highlighting the "S-719 (ES20) - Water Mist Fire Protection" folder and its sub-items: "Technical Requirements Documents", "Quality Requirements Specifications", "Information Requirements Specifications", "Data sheet", "Help & Guidance", and "Future Amendment Proposals".

The main dashboard area contains several widgets:

- Activity stream:** A table listing activities with columns for ID, Last Activity Date, Name, and Description. The table shows 10 items, including "S719-TR-3002" and "S719-TR-2056".
- Metric: Baseline clause count:** A pie chart showing the distribution of actions: Add (blue), Delete (green), Replace (orange), and No Action (red).
- Metric: Technical Specification Progress:** A pie chart showing the status of technical specifications, with a legend including Draft, Ready for TW check, Ready for shaping, Core approved, Approved for 3rd Party, Preparation for alignment, Ready for alignment, Aligned, Published, and Other.
- Metric: New total requirements:** A pie chart showing the distribution of actions for new total requirements.
- Metric: Datasheet Progress:** A pie chart showing the status of datasheets.
- Metric: IRS Progress:** A pie chart showing the status of Information Requirements Specifications (IRS).
- Metric: QRS Progress:** A pie chart showing the status of Quality Requirements Specifications (QRS).
- Bar charts:** Several bar charts showing the number of items for various categories, such as "02: Missing Datasheet Relations", "03: Missing Quality Relations", "08: Missing Coverage Flag", and "09: Missing verification method".



Digitization - Jama

5.2.2 - V28
S719-TR-2029 - Technical Requirement

PROJECT ID:
S719-TR-2029

GLOBAL ID:
GID-95895

ABOVE SECTION AMENDMENT:
-

TITLE:
-

SECTION NUMBER:
5.2.2

BELOW SECTION AMENDMENT:
Add new list item (9)

TYPE OF GAP:
Safety risk reduction

REQUIREMENT TEXT:
(9) Oil and gas applications where fire test protocols do not currently exist (see Chapter 17).

JUSTIFICATION:
Where current fire test protocols do not exist, this clause permits the development of a robust water mist fire protection system. Evidence shall be provided for the performing and successfully completing fire testing that is pertinent to the risk; carried out and conducted by an internationally recognized fire testing laboratory. Accompanied with a full report describing the results of the performance-based fire testing and of the component evaluations. The pass/fail criteria shall also be established prior to fire testing. The manufacturer's design installation and maintenance manual is also a requirement. This is a collaboration process with qualified 3rd parties.

PROPOSED VERIFICATION :
Manufacturer of the water mist system to present evidence that that the systems design has been tested and 3rd party witnessed.

COVERAGE NEEDED:
Information Requirement, Quality Requirement, Datasheet Element

ACTION:
Add

REQUIREMENT TYPE:



ID	Name	Type	Suspect
5 Downstream Items			
S719-DSE-38	Approved system	Related to	Yes: Clear
S719-IR-29	Design manual	Related to	Yes: Clear
S719-CASR-4	Fire test certificate/approval report (listed system)	Related to	Yes: Clear
S719-DSE-33	Protected item / area / volume	Related to	Yes: Clear
S719-DSE-34	Water mist system type	Related to	Yes: Clear



Digitization - QV Scribe

Supplementary requirement text (requirement)

- Short, concise and exactly one imperative – common understanding for a minimum essential requirement.

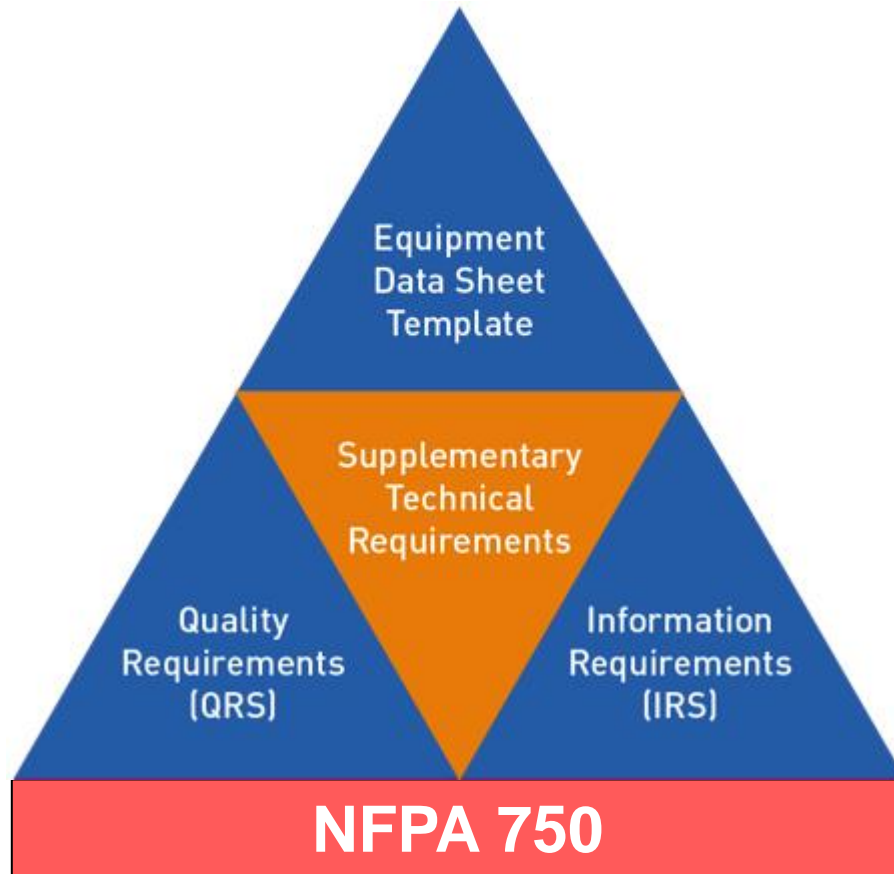
Quality Score Summary		
Score	Reason for this score	Risk and Action
5	No problems found with this requirement that impact the Quality Score.	Very Low Risk Includes exactly one imperative and uses clear, unambiguous terminology to express the requirement.
4	Minor problems with this requirement. These may include: - Excessive use of continuances - No Directives (off by default)	Low Risk These issues are generally low-risk but they make the requirements more difficult to work with and should be addressed.
3	Major problem with this requirement. These may include: - A single vague, subjective, or weak term - A single negative imperative	Medium Risk The presence of these terms usually indicates that the meaning of the requirement will be ambiguous, and it may be difficult to test.
2	Multiple major problems with this requirement. These include more than one: - Vague, subjective, or weak terms and/or - Negative Imperatives	High Risk Having multiple quality issues within the same requirement heightens the risk of misinterpretation. This can lead to product failure or costly rework.
1	Critical problems with this requirement. These may include: - No imperative or multiple imperatives, and/or - Several vague, subjective, or weak terms	Very High Risk Requirements that have problems with the imperatives or more than two instances of problematic language represent the highest risk. It is likely that important information will be missed in the development process.
	Quality Warnings were found in this requirement. These may include: Universal Quantifiers, Passive Voice, Incomplete Sentences, and/or Justification Information	Potential for Risk The proper use of phrases identified in these categories depends on the context in which they are used. When these potential issues are found a warning will be shown but they do not impact the Quality Score.

Hydraulic chambers **shall** be provided with two ports for flushing.

Hydraulic chambers **should** have two ports located at **extreme** ends to allow **efficient** flushing.



Specification Development



Lead SME & Core WG

- **TRS** – full gap analysis, development of essential minimum supplementary requirements over NFPA 750.
- **DS** – for procurement, not product.
- **IRS** – minimum information for the project – e.g. DIOM, hydrostatic test certificate etc.
- **QRS** – minimum quality interventions (by purchaser) according to CAS level.


Standardized digital proposal formats, templates & datasheet configurations = less reworking and faster responses when tendering.



Shaping – Full work group



The Datasheet

Row	S-719D Data Sheet for Water Mist Fire Protection Systems			Issue
2	Tag No. :	<i>Insert Tag Number</i>		
3	Service :	<i>Insert Service Description</i>		
4	Ref. Clause	Description	Additional notes	
21	Site conditions			

22	17.8.1, 8.5.6.6.2	Location environment :	Select	<div style="border: 1px solid black; padding: 5px;"> Select onshore – coastal onshore – desert onshore – inland offshore – fixed offshore – floating marine (ship) </div>
23	8.5.4	Blast protection consideration :	Input Data	
24	6.2.2.1, 6.5.7.1, 8.3.7	Seismic consideration :	Input Data	
25	17.8.1, 6.1.3.1, 6.6.4, 6.6.5, 8.1.3, 8.5.4	Corrosive atmospheres. :	Input Data	
26	17.8.1	Altitude :	<1000	
27	12.5.1.1, 12.5.1.2	Water quality :	Input Data	

28	17.8.1, 6.10.3.4	Minimum ambient air temperature :	4	°C
29	17.8.1, 6.10.3.4	Maximum ambient air temperature :	54	
30	12.5.4.3, 17.7.1, 17.7.2, 17.7.3, 8.1.3, 8.1.4, 8.3.7, 8.5.4	FFS enclosure (fire fighting skid) :	Select	
31		Transport and storage conditions :	within normal service conditions	
32		Extended periods of standstill :	No	
33	17.8.1	Maximum relative humidity :	100	
34	17.8.1	Ingress protection :	IP55	

94	5.2.2, 1.2	Water mist system type :	Select
95	4.1.1.1	Water mist performance objective :	Select
96	5.2.2	Protected item / area / volume :	deluge
97		Protected item / area (additional fire protection) :	dry pipe
98		Protected item / area Storage :	engineered
99	6.10.1.1	System actuation :	fire scenario engineered
100	8.2.2	Maximum height of protected item / area / volume :	local-application
101	6.6.6.1	Nozzle protection :	occupancy protection
102		Pre-engineered systems	preaction protection
103	12.3.1	Duration : rundown time of turbine :	Input Data
104	12.3.1	Duration : time necessary to secure fuel lines to the rotating equipment :	Input Data

- Select Supplier completed, pick list of pre-defined values (may be pre-populated with a default value).
- Input data Supplier completed data entry.
- Select Purchaser completed, pick list of pre-defined values (may be pre-populated with a default value).
- Input data Purchaser completed data entry.
- Select Either supplier or purchaser completed, pick list of pre-defined values (may be pre-populated with a default value).
- Input Data Either supplier or purchaser completed data entry.
- Select Selection of units from a pre-defined pick list.



The Quality Requirements

	CUSTOMER ASSESSMENT ACTIVITIES	CAS			
		A	B	C	D
1	Operational planning and control activities				
1.1	Quality planning (ISO 9001, 8.1 and ISO 10005)	H	W	R	-
1.2	Inspection and testing planning (ISO 9001, 8.1 and ISO 10005)	H	W	R	-
1.3	Pre-assessment/inspection planning	H	W	S	-
2	Design and development activities				
2.1	Design documentation review (datasheet, P&ID, G/A)	H	H	W	R
2.2	Fire test certificate/approval report (listed system) 13.4.6, 16.1.2.1, 16.3, 17.1, 17.2, 17.4.1, 17.5.2, 5.2.2	H	W	R	R
2.3	Fire scenario engineered solutions only 13.4.6, 16.3.2, 17.1.4, 17.1.7, 17.2, 17.5.2, 9.1.5	H	H	H	H
5	Release of product or service from suppliers/manufacturers works				
5.1	Documentation review; as per IRS (S-719L) 17.18, 17.19, 17.2	H	H	H	H
5.2	Preparation for handling, packing, preservation and storage 17.7.9, 8.5.5.2	H	H	-	-
5.3	Spare parts and special tools check 5.1.3	H	H	S	S
5.4	Final inspection 17.11, 17.19.1	H	H	W	W
5.5	Release equipment	H	H	H	H
6	Water mist system commissioning & site acceptance test (SAT) when performed by the supplier				
6.1	Pneumatic test 14.1, 14.2, 17.19	R	R	R	R
6.2	Hydrostatic test 14.1, 14.2, 8.3.2	W	W	W	W
6.3	Electrical detection and actuation test 12.6.2.2, 14.1, 14.2, 16.1, 16.2.9, 16.3, 17.6, 6.10, 6.9, 7.2.1.3, 8.6.3, 8.8, 8.9, FIGURE A.14.1.4	W	W	W	W
6.4	Mechanical equipment inspection and testing 12.5, 12.6, 13.4.4, 14.1, 14.2, 16.1, 16.2, 16.3, 16.4, 17.1.8, 17.17, 17.7, 6.10, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.2.1.3, 7.4, 8.1, 8.10, 8.2, 8.3, 8.5, 8.6, 8.8, 8.9, FIGURE A.14.1.4, Table 8.3.4.2	W	W	W	W
6.5	Water supply inspection 12.1.2, 12.4, 12.5, 12.6, 12.7, 14.1, 14.2, 17.5.2, 8.7.2, 8.8.4.2	W	W	W	W

Conformity Assessment System

H = Hold

Activity shall not proceed without the approval of the customer or customer's representative

W = Witness

Supplier shall notify the customer before proceeding. (May proceed without witness - if the customer does not attend after the agreed notice period.)

R = Review

Review of the supplier's information to verify conformance to requirements.

S = Surveillance

Observation, monitoring or review by the customer of an activity, operation, process, product.

- = No participation

No intervention is required by the customer.



The Information Requirements

S-719L Information Requirements for Water Mist Fire Protection Systems



Requirements

Column	Heading - Details and requirements
A	Code - a unique identifier for the Information Requirement assigned by IOGP JIP33 DigitalTool
B	Requirement - a short description of the Information Requirement based on the description in the Parent Standard, IOGP Specification or an Industry Standard Information Requirement Title.
C	Condition Invoking Requirement - describes special condition(s) under which the Information Requirement is required; e.g., service offshore and weight greater than 1 tonne means information is required. NB: if blank, always required
D	Typical Deliverable - Purchaser to advise the short description of the Information Deliverable that would typically include this Information Requirement
E	Submit With Proposal - Yes or No, where 'Yes' means the Information Requirement is required to be submitted with Suppliers Proposal or 'No' is not required
F, G & H	First Issue Post Purchase Order - issue purpose ('For Information' or 'For Acceptance'), time in weeks for issue of the Information Requirement and Period defined after Purchase Order placement.
I	Required As Built - Yes or No, where 'Yes' means the Information Requirement is required to be 'As Built' on completion or delivery of equipment or 'No' is not required 'As Built'
J	Fulfilled by Information Deliverable Number(s) - identifies which Information Requirement(s) listed in the Supplier Master Information Schedule (SMIS) addresses the Purchasers requirements. NB; it should be noted that one Information Deliverable can fulfil more than one Information Requirement.
K	Translation Required -Yes or No, where 'Yes' means the Information Requirement should be translated into a language(s) (to be advised) other than English and 'No' means to be provided in English
L	Remarks - may include bid clarification questions & decisions (specify author & date)

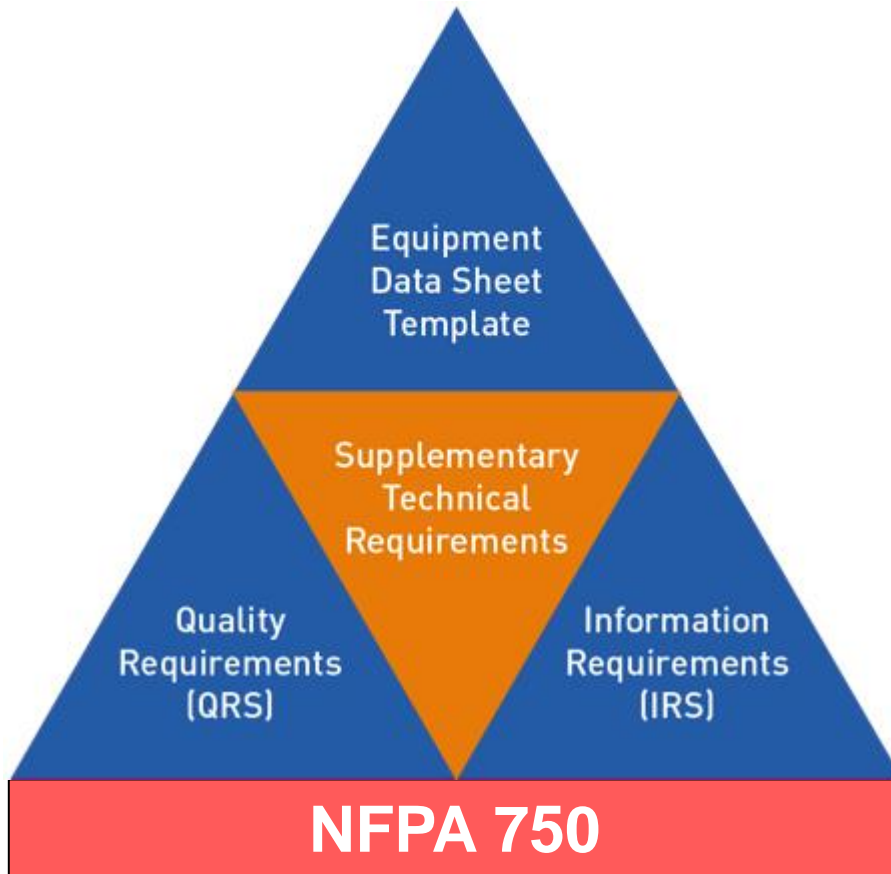
Col A													
Code	Code	Requirement	Condition Invoking Requirement				Typical Deliverable	Submit At Proposal	First Issue Post Purchase Order			Required As Built	
								(Yes/No)	Purpose	(Weeks)	(Period)	(Yes/No)	
S719-IR-39	F												
S719-IR-44	F												
S719-IR-40	F	S719-IR-39	Production test certificate - flexible hose	Required for CAS A only				General Certificate	No	-		WPTD	No
		S719-IR-44	Production test procedure - section valve	For CAS A & CAS B only				Manufacturing Qualification Procedure	No	For Information		WPTD	No
S719-IR-56	F												
S719-IR-57	F	S719-IR-40	Production test certificate - section valve	Required for CAS A only				General Certificate	No	-		WPTD	No
S719-IR-47	F												
S719-IR-42	F	S719-IR-56	Production test procedure - cylinders high	Not required if pump system, for CAS				Manufacturing Qualification	No	-		WPTD	No
S719-IR-35	F	Factory acceptance test (FAT) procedure		Factory Acceptance Test (FAT) Procedure	No	For Acceptance	WAO	No				certificate may be in one combined document. The water mist manufacturer will have their own FAT requirements, these requirements can be increased or decreased in collaboration between, the supplier and the customer, and where applicable the AHJ.	
S719-IR-69	F	FAT records		Factory Acceptance Test (FAT) Records	No	For Information	WAT	No					
S719-IR-66	F	Weight report		Weight Report	No	For Information	WPTD	No					
S719-IR-50	F	Pneumatic test procedure		Pressure Test Procedure	No	For Acceptance	WAT	No					
S719-IR-52	F	Pneumatic test records	include in MRB (Manufacturing Record Book)	Pressure Test Report	No	For Information	WAT	No					
S719-IR-51	F	Hydrostatic test procedure		Pressure Test Procedure	No	For Acceptance	WAT	Yes					
S719-IR-53	F	Hydrostatic test records	include in MRB (Manufacturing Record Book)	Pressure Test Report	No	For Information	WAT	No					
S719-IR-25	F	Commissioning / SAT procedure		Commissioning Instruction	No	For Acceptance	WAT	No					
S719-IR-49	F	Commissioning / SAT records		Completion Certificate	No	For Acceptance	WAT	Yes					
S719-IR-37	F	Spare part list		Spare Part List	No	For Acceptance	WAT	No					
S719-IR-43	F	Special tools list		Special Tools List	No	For Information	WPTD	No					
S719-IR-80	F	Fluid schedule		Fluid schedule	No	For Information	WAO (Monthly)	No					
S719-IR-68	F	Safety datasheet for liquids		Safety Datasheet	No	For Information	WAO	No					



Shaping – Full work group



Shaping



Full work group – 12 operators

Full WG agreement to essential minimum

**NFPA 750 requirements 909 unmodified;
68 additional requirements**

**179 - Data sheet items
36 - Quality requirements
64 - Information requirements**



Public Review



Stakeholder Review – Operators, water mist suppliers ...

My Reviews All Reviews (1262) FILTER BY... VIEW Grid Table

ID	Name	Project
REV-683	ES20 - Water Mist Fire Protection - Information Requirements (Danfoss)	S-719 (ES20) - Water Mist Fire Protection
REV-684	ES20 - Water Mist Fire Protection - Data Sheet (Danfoss)	S-719 (ES20) - Water Mist Fire Protection
REV-685	ES20 - Water Mist Fire Protection - Technical Requirements (Danfoss)	S-719 (ES20) - Water Mist Fire Protection
REV-686	ES20 - Water Mist Fire Protection - Quality Requirements Review (Firenor)	S-719 (ES20) - Water Mist Fire Protection
REV-687	ES20 - Water Mist Fire Protection - Information Requirements (Firenor)	S-719 (ES20) - Water Mist Fire Protection
REV-688	ES20 - Water Mist Fire Protection - Data Sheet (Firenor)	S-719 (ES20) - Water Mist Fire Protection
REV-689	ES20 - Water Mist Fire Protection - Technical Requirements (Firenor)	S-719 (ES20) - Water Mist Fire Protection
REV-690	ES20 - Water Mist Fire Protection - Quality Requirements Review (Marioff)	S-719 (ES20) - Water Mist Fire Protection
REV-691	ES20 - Water Mist Fire Protection - Information Requirements (Marioff)	S-719 (ES20) - Water Mist Fire Protection
REV-692	ES20 - Water Mist Fire Protection - Data Sheet (Marioff)	S-719 (ES20) - Water Mist Fire Protection
REV-693	ES20 - Water Mist Fire Protection - Technical Requirement (Marioff)	S-719 (ES20) - Water Mist Fire Protection
REV-694	ES20 - Water Mist Fire Protection - Quality Requirements Review (Phirex)	S-719 (ES20) - Water Mist Fire Protection
REV-696	ES20 - Water Mist Fire Protection - Information Requirements (Phirex)	S-719 (ES20) - Water Mist Fire Protection
REV-697	ES20 - Water Mist Fire Protection - Data Sheet (Phirex)	S-719 (ES20) - Water Mist Fire Protection
REV-698	ES20 - Water Mist Fire Protection - Technical Requirements (Phirex)	S-719 (ES20) - Water Mist Fire Protection
REV-699	ES20 - Water Mist Fire Protection - Quality Requirements Review (Ultrafog)	S-719 (ES20) - Water Mist Fire Protection
REV-700	ES20 - Water Mist Fire Protection - Information Requirements (Ultrafog)	S-719 (ES20) - Water Mist Fire Protection
REV-705	ES20 - Water Mist Fire Protection - Data Sheet Review (Ultrafog)	S-719 (ES20) - Water Mist Fire Protection
REV-706	ES20 - Water Mist Fire Protection - Technical Requirements (Ultrafog)	S-719 (ES20) - Water Mist Fire Protection
REV-707	ES20 - Water Mist Fire Protection - Quality Requirements Review (VID Fire Kill)	S-719 (ES20) - Water Mist Fire Protection

IOGP-JIP33 Mark Davies (IOGP) | Help | Log Out

ES20 - Water Mist Fire Protection - Technical Requirements (VID Fire Kill) - V2 MY STATUS Moderator | Closed: 04/12/2019

107 items Filter Find Highlighting: ON View Actions Export

This review is closed

S719-SET-28 - Data Sheet Elements

Add a new comment

David Sherrington (Ultrafog) Comment
04/12/2019 V2

Suggest the following are added to the datasheet:

- LV motor efficiency class and rating - e.g. IE3, NEMA premium efficiency, etc
- Main and emergency power supply details - e.g. voltage, frequency, power capacity, no. of phases & phase configuration, etc
- UPS requirements - e.g., minimum duration (hours, days...), purpose (to the control system only, or to power the entire system)
- Control voltage
- Communication protocol

Resolve Delete

1.14.7 9

Above section amendment: No information entered

Title: Design Objectives and Fire Test Protocol

Below section amendment: No information entered

1.14.7.1 9.1

Above section amendment: No information entered

Title: General

Below section amendment: No information entered

1.14.7.1.5 9.1.5

Where current fire test proposals do not exist, fire scenario solutions shall be engineered by developing a collaboration process with qualified third parties. The performance of the system design shall be consistent with the testing (see Chapter 17).

ID: S719-TR-2880

Above section amendment: Add new section

Title: Fire Scenario Engineered Solutions

Below section amendment: No information entered

Justification: Where current fire test protocols do not exist, this clause permits the development of a robust water mist fire protection system. Evidence shall be provided for the performing and successfully completing fire testing that is pertinent to the risk; carried out by conducted by an internationally recognized fire testing laboratory. Accompanied with a full report describing the results of the performance-based fire testing and of the component evaluations. The pass/fail criteria shall also be established prior to fire testing. The manufacturer's design installation and maintenance manual is also a requirement. This is a collaboration process with qualified 3rd parties.

1.14.7.2 9.2

Above section amendment: No information entered

Alignment.



Alignment – address comments from the public review.

- **482 comments**

210 TRS ; 105 DS; 126 QRS & 41 IRS - [47 red flags]

- **Analysis and resolution**

- Tiered system, primary focus on red flags;
- All comments reviewed and actions justified.

- **Finalization drafts for publication**

- Technical writer checks;
- Justification paper.

- **Approval to publish**

- Project director sign off.



Specification Voting



Specification Voting – 12 operators



Operator	Voted	FAP
ConocoPhillips	Approved	
Woodside	Approved (with comments)	Datasheet to be rationalized.
Equinor	Approved (with comments)	IRS to be rationalized.
Shell	Approved	
Petrobras	Abstain	
ExxonMobil	Approved (with comments)	General FAPS
IOGP	Approved	
ENI	Approved (with comments)	General FAPS
Saudi Aramco	Approved	
BP	Approved	
Petronas	Approved	
Chevron	Approved	



Publication of S-719



Publication of S-719

Use the specifications

FREE to download from our [Online library](#)

The screenshot shows the JIP33 Specification Library homepage. At the top, there is a navigation menu with links for ABOUT US, NEWS, GET INVOLVED, SPECIFICATION LIBRARY, SPECIFICATION DEVELOPMENT, and CONTACT US. The main heading is "Specification Library". Below this, there are three paragraphs of text: "All JIP33 specifications are available for use by everyone.", "The more the JIP33 specifications are adopted, the more opportunities there are for efficiencies in our industry.", and "We welcome feedback from users on the content of the JIP33 specifications and their experiences in applying them." To the right of the text is a speech bubble icon and a "Send your feedback!" button. Below the text is a grid of filter buttons: Equipment (Electrical), Equipment (Instruments), Packages, Equipment (Mechanical), Equipment (Safety), Support, and Equipment (Subsea). At the bottom, there is a breadcrumb trail: "Water Fire Mist Protection Systems - S-719".

The screenshot shows the JIP33 Water Fire Mist Protection Systems page. At the top, there is a navigation menu with links for ABOUT US, NEWS, GET INVOLVED, SPECIFICATION LIBRARY, SPECIFICATION DEVELOPMENT, and CONTACT US. The main heading is "Water Fire Mist Protection Systems". Below this, there are three paragraphs of text: "All JIP33 specifications are available FREE for use by anyone.", "The more they are used, the more efficiencies they will create across in our industry.", and "We welcome feedback from users, especially your experience of using these specifications." To the right of the text is a speech bubble icon and a "Send your feedback!" button. Below the text is a table with two columns: "Name" and "Download". The table contains four rows of specifications, each with a "Download" link.

Name	Download
Water Mist Fire Protection Systems - Supplementary Specification to NFPA 750	Download
Water Mist Fire Protection Systems - Quality Requirements	Download
Water Mist Fire Protection Systems - Information Requirements	Download
Water Mist Fire Protection Systems - Datasheet	Download

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We also welcome feedback from users on specifications already published, both their content and your experience of using them. You can use the feedback form below or email us at feedback@jip33.org. All feedback will be considered when the specification is updated.

You can also follow us on [LinkedIn](#), on [Twitter](#) or just [get in touch](#) if you have any questions about JIP33.

Contribute to development

[Comment on specifications](#) during their consultation periods and give us feedback at events.

Specification Development

Draft revisions of the specifications will be made available on this site for a 4 week duration for public review and comment.

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Feedback is strongly preferred within the digital specification development tool [Jama Connect](#) to allow more efficient compilation and response to comments. Please email feedback@jip33.org for access to the tool including details of the specification you would like to comment on.

Operator staff should contact the SC representative to feed their comments back through their SME. If returning comments via the digital tool is not possible, please download the document and mark up your comments. Submit the marked up file to feedback@jip33.org

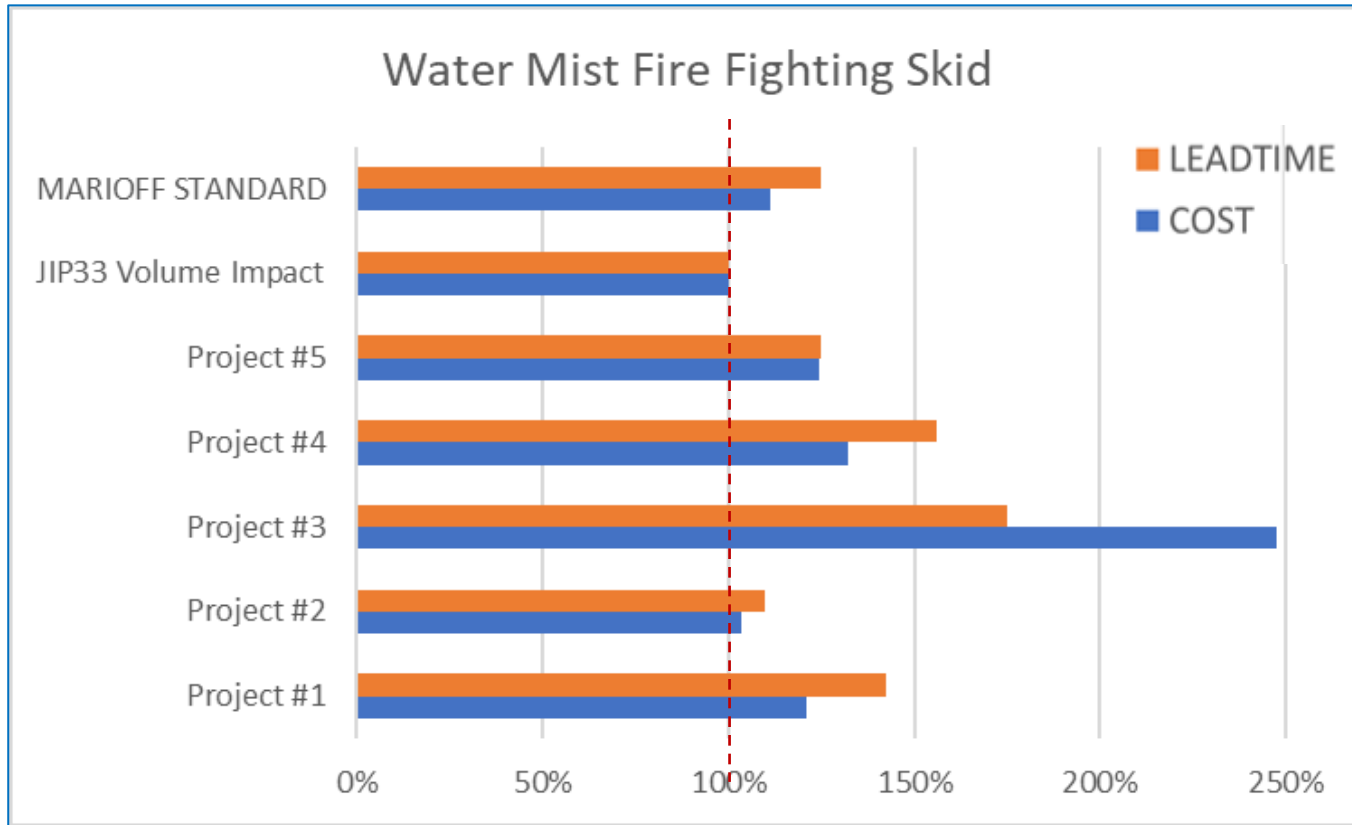
Specifications in development: Drafts will be available here for public review as they are ready.





Case study

Supplier Case Study – Water Mist Fire Protection



Notes:

- On average JIP33 gives 36% cost reduction and 35% lead time reduction over prior OpCo specs



Marioff



Supplier Case Study – Water Mist Fire Protection

DESIGN COMPARISON / ASSUMPTIONS



Sheet on the right is showing main cost/lead time drivers in each project. However they are not the only factors on these projects explaining the cost and lead time.

Marioff standard design is equal to the JIP33 from technical part, but difference in cost and lead time comes from assuming a significant volume impact.

OPTION LIST	MARIOFF	Project #1	Project #2	Project #3	Project #4	Project #5
MARIOFF base standard design	Green	Green	Green	Green	Green	Green
Pressure Transmitters instead of Pressure Switches		Green		Green		
Visual Level Indicator for water content monitoring			Red			
JB in SS316 with bottom cable entry instead of lateral				Green	Green	
Tubing and fittings in 6Mo instead of SS316				Green		
Cabinet designed to resist to blast load overpressure				Green		
Lighting system inside the cabinet				Green		
JB in SS316 painted according to marine cycle				Green		Green
JB in SS316 - special vendor				Green	Green	
Cable - special vendor				Green		



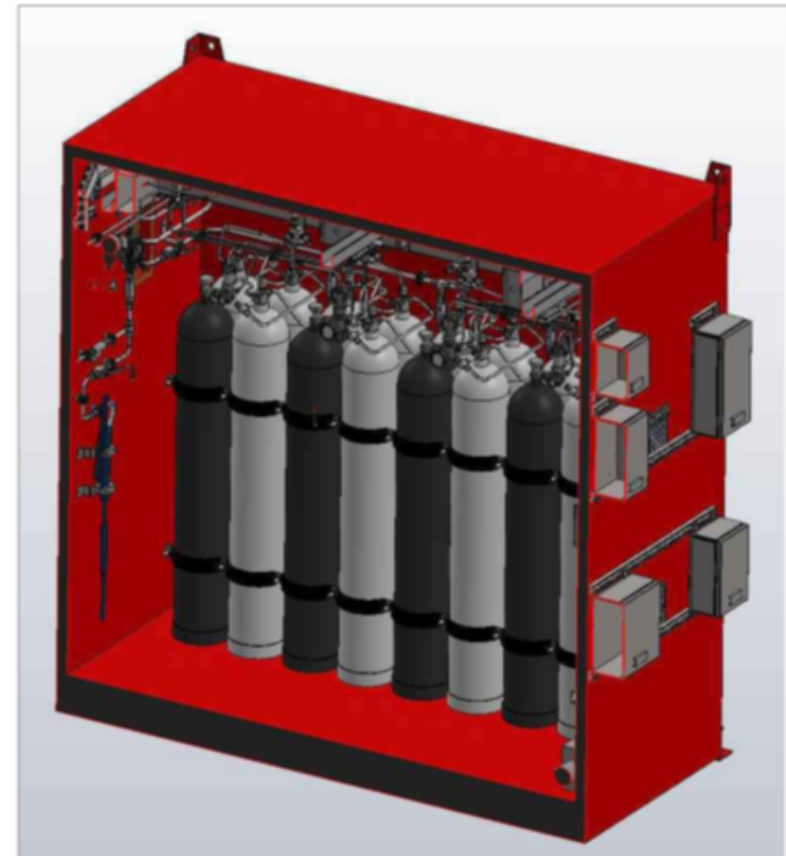
CONCLUSION

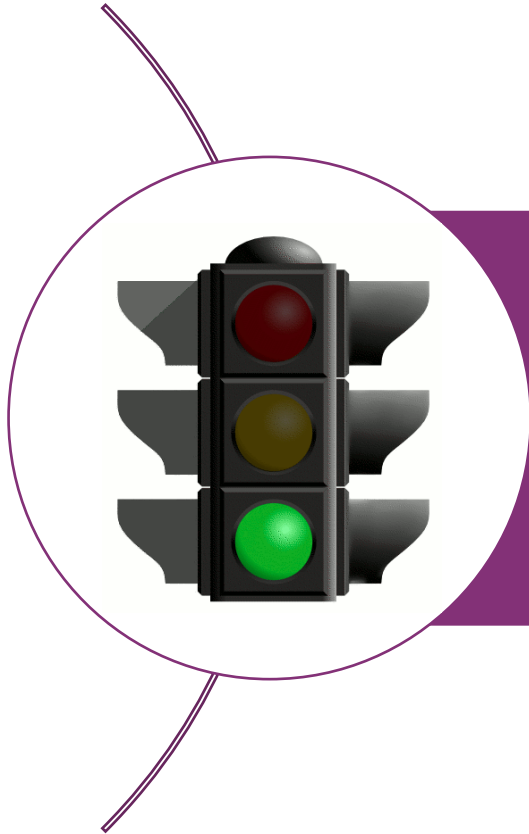


The «Water Mist» part has only a limited impact on the overall system design, because it is the part that cannot be changed due to type approvals.

The main drivers that affect cost are instrumentation, cables and wiring, material of specific components (tubing/fittings) and special requirements like blast resistance.

In order to reduce cost and improve delivery times, we recommend to adopt MARIoff standard design which complies to JIP33 standards inside the cabinet when possible. Terminal Points and interfaces of the skid can be configured project specifically.

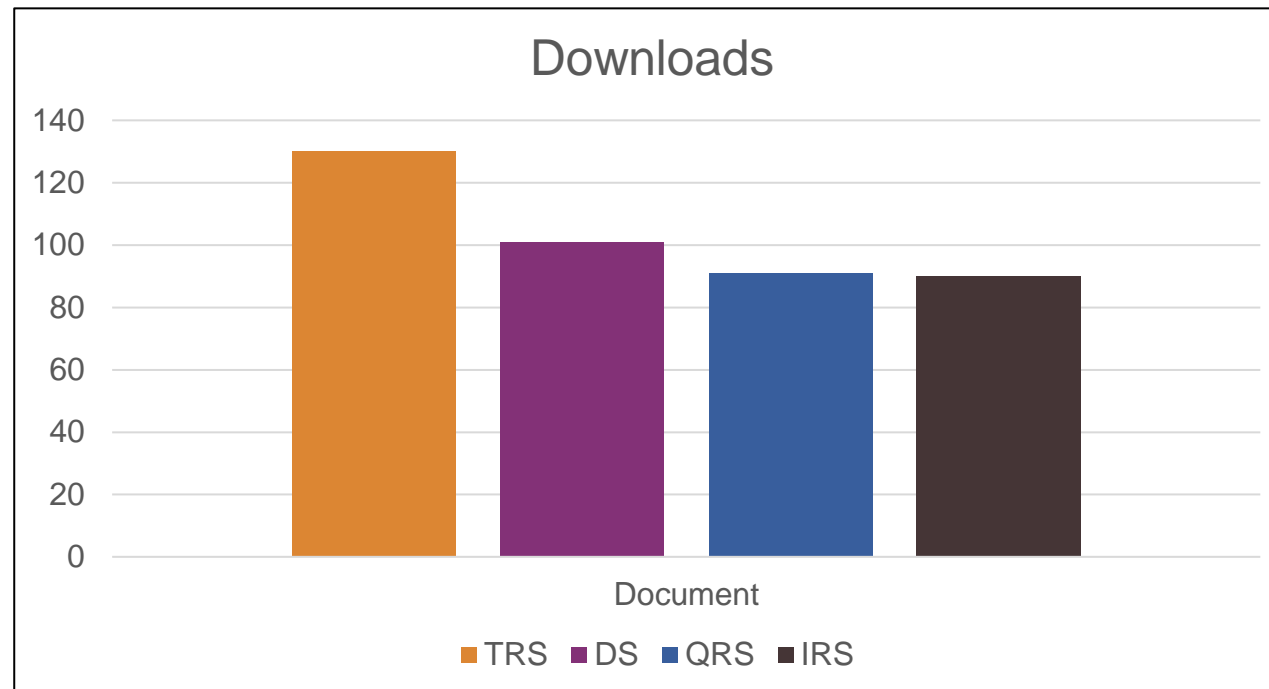
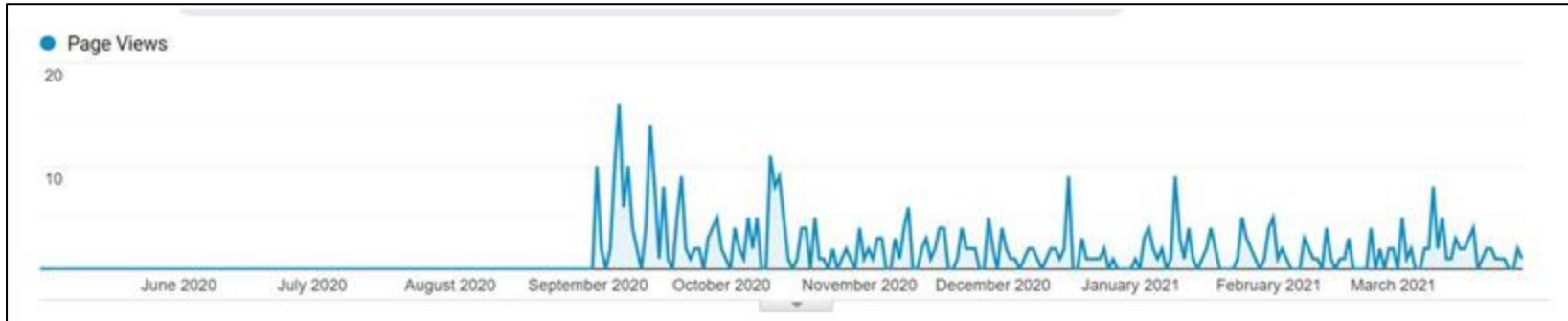




What's next?

<https://www.iogp-jip33.org/>

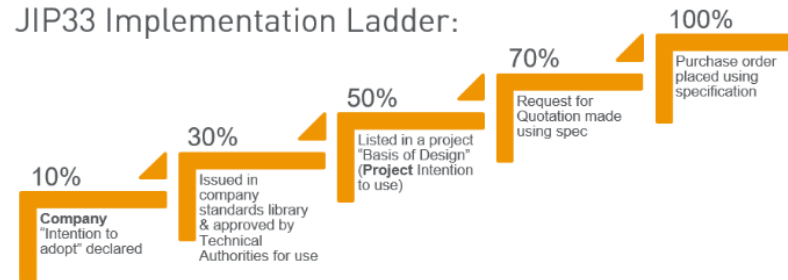
- **Access to the specifications** – IOGP measure the interaction.



What happens next?

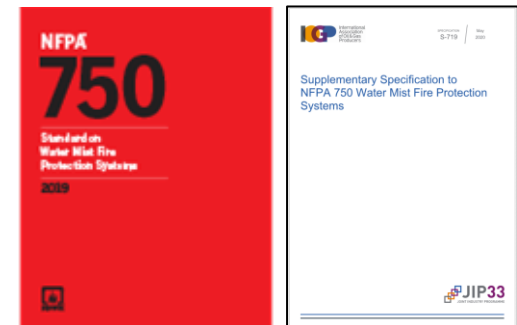
- **Adoption** – IOGP measures the implementation of the specification.

Full Title	OpCo1	OpCo2	OpCo3	OpCo4	OpCo5	OpCo6	OpCo7	OpCo8	OpCo9	OpCo10	OpCo11	OpCo12
S-719 Water Fire Mist Protection	50% ▲	10%▲	10%	30%	10%	30% ▲	10%	30%	30% ▲	30%▲	10%	10%



Average Progress (Supplementary Specification only)

- **Case studies** – feedback from the water mist suppliers.
- **Maintenance / Expansion** – IOGP shall update S-719 in line with NFPA 750 2023, and consider expanding to match technological advances in the water mist sector. Public user feedback review.



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Thank You.

