



**The Source**  
for Critical Information and Insight™

## Ensuring Access to Critical Historical Standards

IHS meets customer requirements for access to historical versions of standards publications

## Case Study

### Why Historical Standards Matter

Standards are the DNA of design, forming the building blocks of all that is engineered around us, including the innovative new products that drive so much of the global economy today. But just as DNA can evolve over time, so too do standards change as technology advances, new regulatory requirements must be met, or new goals for safety, security and sustainability come into play.

Of course, standards are created by consensus through a typically lengthy review and revision process, and as such the pace of a standard's evolution can seem glacial. But the standards landscape as a whole actually evolves quite rapidly. The evidence: IHS updated more than 55,000 revised, new, reconfirmed and withdrawn standards across its more than 370 standards developing organization (SDO) partners last year alone.

But just because a standard is revised or even cancelled, does that mean we can consign it to the "deleted" folder for good? Of course not! Engineers, researchers, scientists and other technical professionals must have access to the latest versions of all the standards applicable to their work, but "historical" standards can also be critically necessary for a variety of reasons:

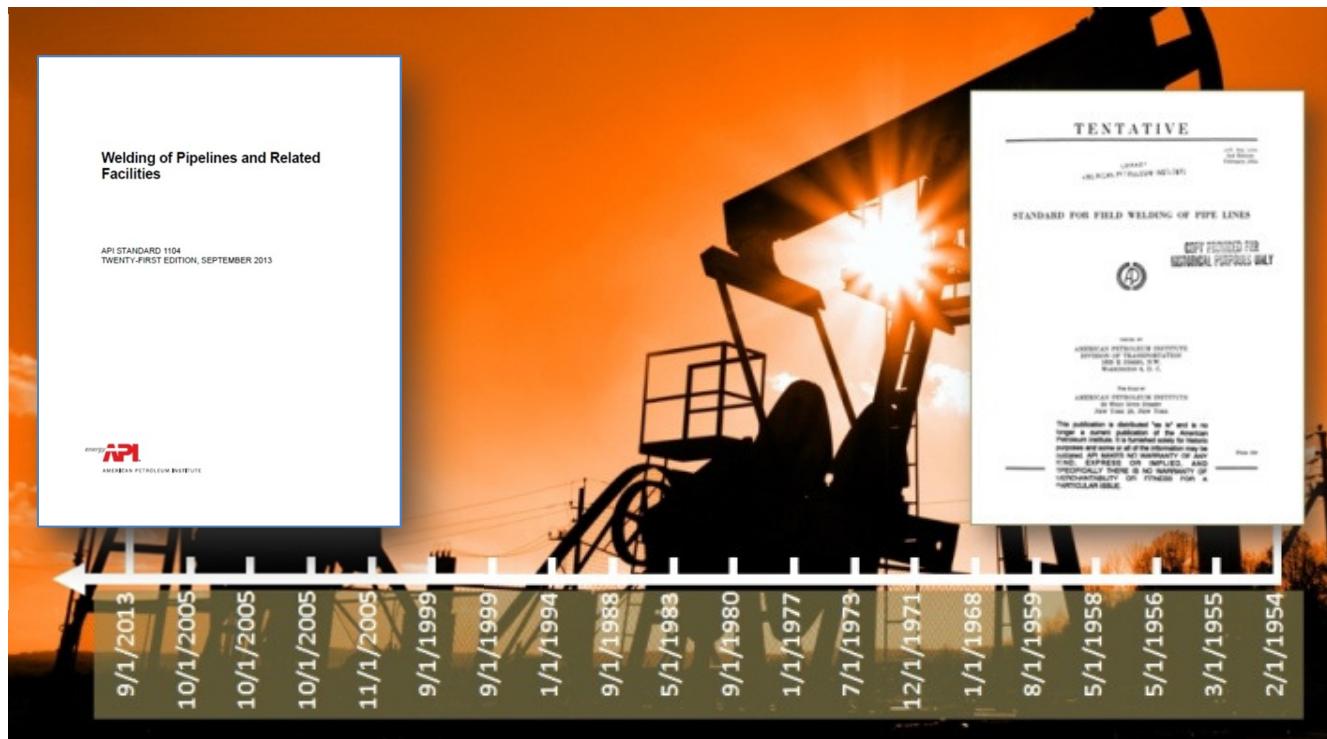
- Historical standards can show the evolution of technology over time, helping an engineer understand why a system or component was designed a certain way.

- Engineers may need to provide ongoing support for older equipment and require access to the "standards of record" in force at the time the equipment was put into service.
- An engineering team may need access to historical standards in the event of changes to regulations covering an existing system, in order to ensure ongoing compliance with new requirements.
- A user may want to understand the changes between two versions of a standard; in this case, redlines – or version-comparison documents – can be useful for quickly identifying changes and their impact.
- A company may use historical standards as part of its program to train and educate its engineering staff, particularly when new cadres are being brought in to replace older staff set to retire.

### IHS Users and Historical Standards

IHS customers have firsthand experience with the value of historical standards – not surprising given that the user base for IHS Standards Expert®, the company's standards management platform, encompasses more than 550,000 users, at over 3,200 companies, across major industry sectors, and in more than 30 countries.

In their verbatim responses to the regular IHS Customers First survey, these users have told us that they need historicals to perform assessments of existing structures, modify installed equipment built to older standards from



## Standards evolve over time to reflect changes in technology, regulations or other requirements. The American Petroleum Institute Standard 1104, "Welding of Pipelines and Related Facilities," has gone through much iteration since the 1954 version was published.

decades past, and operate at multiple jobsites that use different versions of a particular code – and these are just a few examples: Overall, access to historicals standards ranks as one of the top user requests, figuring in roughly 6 percent of the verbatim comments received with each of the three annual Customers First surveys.

IHS is well-positioned to meet the demand for access to historical standards. The company began distributing standards documents more than 45 years ago, in an era when paper was the predominant format and microfiche counted as "advanced" technology. Over the decades since these humble beginnings, IHS has accumulated a vast storehouse of historical publications. Today, among the more than 1.6 million documents in the IHS index of standards, roughly 75 percent of the documents are historical in nature – revised, cancelled, replaced publications. That means that the IHS Standards Expert index includes approximately three times as many historical documents as active standards, making it the industry's largest repository of historical standards publications.

Despite the availability of historical documents within IHS Standards Expert, many IHS customers continue to subscribe solely to active standards packages, which typically include only the most current version of an SDO's publications. This can be because decision-makers at a company might not fully appreciate the value and importance of providing access to older documents, or they may question whether usage of the historical documents would be sufficient to justify the cost. Nevertheless, as the Customers First survey results show, access to historicals remains a major issue for many end users that IHS serves.

### Opening up Access to Historicals

To meet its customers' requirements for historicals, IHS has been working on two sides of the access equation: the technology and the content.

**Technology:** The IHS standards management solution makes it easy to find and access historical documents. Previous versions of standards can be viewed in search results (by unchecking the **"Active Status"** box under

**Blue represents CHANGED Text**

**Green represents INSERTED (New) Text**

**Grey represents MOVED Text**

**Red represents DELETED Text**

calculated sediment content  $\leq 0.005\% \text{ m/m}$  as determined in the report as " $0.005\% \text{ m/m}$ ". The test result shall reference Test Method D 473/API MPMS Chapter 10.1 as the procedure used.

Norm 1. Since water is commonly reported as volume,  $S_e = \frac{V_e}{V_{cal}} \times 100$  (2014) Since sediment probably would be sand (silicate oxide, which has a density of 2.32) and a small amount of other naturally occurring materials (with a relative density lower than that

11.1.1 *Repeatability*—The difference between successive tests, obtained by the same operator with the same apparatus under constant operating conditions on identical test material, would, in the long run, in the normal and correct operation of the test method, exceed the following value in only one case in twenty:

$$k = 0.017 + 0.295S$$

where:  
 $R$  = repeatability of the test, and  
 $S$  = average result, as a percentage by mass, of the values being compared.

11.1.2 *Reproducibility*—The difference between two single independent test results obtained by different operators using different apparatus in different laboratories on identical test material, would, in the long run, in the normal and correct operation of the test method, exceed the following value in only one case in twenty:

$$R = 0.033 + 0.295S$$

where:  
 $R$  = reproducibility of the test, and  
 $S$  = average result, as a percentage by mass, of the values being compared.

11.2 *Bias*—The procedure in this test method has no bias because the  $\text{m/m}$  of sediment can be defined only in terms of a test method.

12. **Keywords**

12.1 crude oil; extraction; fuel oil; sampling; sediment

Hover cursor over "flag" to reveal change detail from previous version

**Redline version-comparison documents allow users to quickly identify and understand changes between versions of the same standard.**

"Filters" in the left-hand search bar), by clicking on "History" in the search results, or by viewing "Document Details" in the document window for a standard. The document history will list available previous versions and indicate the revision dates. A user with the necessary subscription rights can simply click on the "View" icon to access the prior version of the document.

**Content:** IHS has been working with a growing number of its SDO partners to craft active-historical standards packages. These collections combine active and historical standards in a single package at an attractive price, eliminating the need to subscribe to separate active and historical collections. This "package approach" opens up the opportunity for customers to gain access to often three times as much content at a relatively small increase over the cost of an active-only subscription. The lower cost reflects both the "packaged" nature of the collections and the recognition that usage of historical documents is sometimes lower than usage of active documents, helping to alleviate decision-makers' concerns in this regard.

**Redlines:** In addition, many of the new active-historical packages provide access to so-called "redlines," or version-comparison documents. Redlines are separate versions of a document – distinct from the active or

historical texts. A redline provides visual and textual cues that allow an engineer to quickly recognize and understand the changes that have been made between different versions of a standard. This can be critical in cases when an engineer needs to get up to speed rapidly on new requirements in a standard, or understand how changes to a standard could impact ongoing projects or the compliance of installed equipment. Redlines are available from IHS for an increasing number of documents from a growing list of SDOs. (See listing of available packages on next page.)

In summary, the new active-historical and active-historical-redlines standards collections from IHS meet the requirements expressed by our customers for increased access to the extensive IHS repository of historical standards documents. The benefits of these packages are applicable both to end users (e.g., ease of access, single point of entry for all their standards needs, hyperlinks to referenced standards) and management (e.g., cost-effective, single provider of all your standards requirements, satisfied and productive end users). With these new collections from IHS, you and your colleagues will truly be prepared to learn from history – so you don't have to repeat it!

### Standards Developing Organizations with Available Active-Historical Collections from IHS <sup>†</sup>

- American Association of State Highway and Transportation Officials (AASHTO) \*
- American Concrete Institute (ACI)
- Asociación Española de Normalización y Certificación (AENOR)
- American Petroleum Institute (API) \*
- American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) \*
- American Society of Mechanical Engineers (ASME) \*
- ASTM International \*
- American Welding Society (AWS)
- Consumer Electronics Association (CEA) \*
- European Aviation Safety Agency (EASA) \*
- Electronic Components Association (ECA) \*
- Electronic Industries Alliance (EIA)
- European Organization for Civil Aviation Electronics \*
- Federal Aviation Administration (FAA) \*
- General Motors (GM) \*
- Hydraulic Institute (HI)
- Insulated Cable Engineers Association (ICEA)
- International Civil Aviation Organization (ICAO) \*
- IPC - Association Connecting Electronics Industries
- International Society of Automation (ISA) \*
- International Organization for Standardization (ISO) \*
- Italian Electrotechnical Committee (CEI)
- Joint Aviation Authorities (JAA)
- Joint Electronic Device Engineering Councils (JEDEC)
- Manufacturers Standardization Society (MSS) \*
- North Atlantic Treaty Organization (NATO) \*
- National Board of Boiler and Pressure Vessel Inspectors (NBBI)

- TECHAMERICA \*
- Telecommunications Industry Association (TIA) \*
- Transport Canada \*
- UK Civil Aviation Authority (UKCAA) \*

### Standards Developing Organizations with Available Historical-only Collections from IHS <sup>†</sup>

- Aerospace Industries Association (AIA/NAS)
- American Nuclear Society (ANS) \*
- American National Standards Institute (ANSI)
- Aeronautical Radio, Inc. (ARINC) \*
- American Society of Civil Engineers (ASCE) \*
- Compressed Gas Association (CGA)
- CSA Group
- Delphi
- Danish Standards (DS) \*
- ESD Association \*
- EUROSOURCE \*
- Ford \*
- Holden
- International Electrotechnical Commission (IEC) \*
- Institute of Electrical and Electronics Engineers (IEEE) \*
- Isuzu
- Mil-specs \*
- National Electrical Manufacturers Association (NEMA) \*
- National Fire Protection Association (NFPA) \*
- SAE International
- UL

<sup>†</sup> Information current as of September 2013. Contact IHS for most current listing of available packages.

\* Redline version-comparison documents available.

#### For More Information about IHS:



**The Source**  
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#### Americas

Tel: +1 800 447-2273  
+1 303 736-3001  
Email: [CustomerCare@ihs.com](mailto:CustomerCare@ihs.com)  
Web: [www.ihs.com](http://www.ihs.com)

#### EMEA

Tel: +44 (0) 1344 328 300  
Email: [Customer.Support@ihs.com](mailto:Customer.Support@ihs.com)  
Web: [www.ihs.com](http://www.ihs.com)

#### APAC

\* Toll Free +800 10002233  
International +604 291 3600  
Email: [SupportAPAC@ihs.com](mailto:SupportAPAC@ihs.com)  
Web: [www.ihs.com](http://www.ihs.com)

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