



XIXème Rendez-Vous Gemmologiques de Paris®

**| ISO standards in the diamond trade:
history and benefits**

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Dear President, Ladies and Gentlemen, dear colleagues,

It is with great pleasure that I join the 19th Rendez-Vous Gemmologiques de Paris. If I proposed to the AFG to present to you the two ISO standards dedicated to gem-quality diamonds, it is because the novelty is important. Of course, it does not claim to revolutionize the profession because its application is not mandatory. But more modestly, its vocation is to perpetuate a nomenclature and a grading system that will likely evolve over time. We will therefore go through a history of ISO and try to identify the undeniable advantages of these two standards in an economic context that is, to say the least, chaotic today.

| Summary

A brief history of ISO

ISO today and some numbers

ISO Standard 24016 | A complicated history
Advantages

ISO Standard 18323 | History and advantages

Conclusion

The summary of this presentation is simple.

I will present a brief history of the International Organization for Standardization - ISO as well as some figures that characterize it. I have taken most of the information on the history of ISO from the website "about ISO" and I strongly invite you to consult it because it is really fascinating. I will then present the history of these two ISO standards respectively for diamond grading and its nomenclature while highlighting the benefits that the trade will be able to draw from them. A quick conclusion will close this presentation.

Brief history of ISO

1946 : 65 delegates from 25 countries aim for international standardization

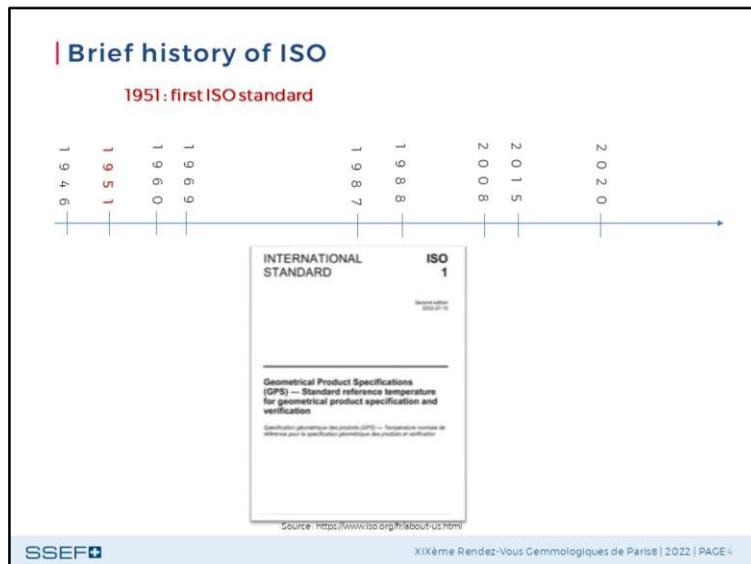


Source: <http://www.iso.org/fr/about-us.html>

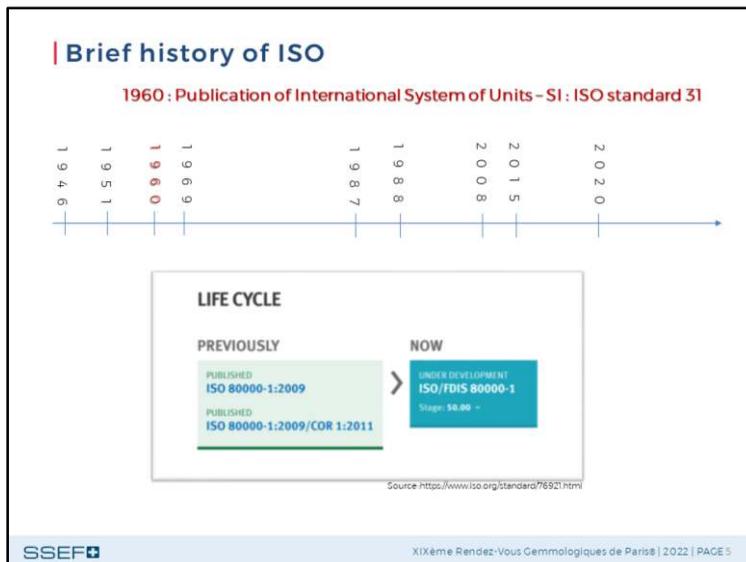
So, a brief history of ISO.

After the Second World War, in 1946, 65 delegates from 25 countries met in London to consider the future of international standardization.

In 1947, ISO was officially formed.



In 1951 - five years after the creation of ISO - the first standard was published. It concerns the "*Standard reference temperature for industrial length measurements*".

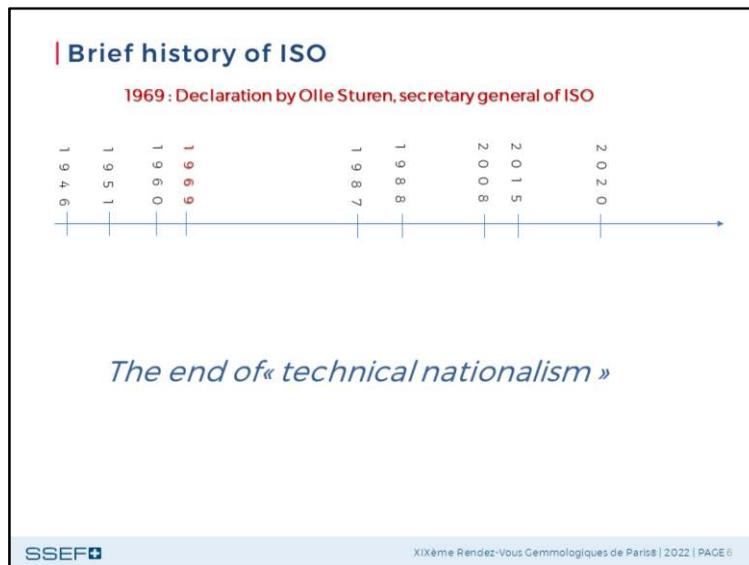


The year 1960 is marked by the publication of the ISO standard which defines the famous International System of Units - SI.

This international system gives the units of the various quantities, for example, the meter for distance and the second for time.

The SI system aims towards a worldwide uniformity of measurement units.

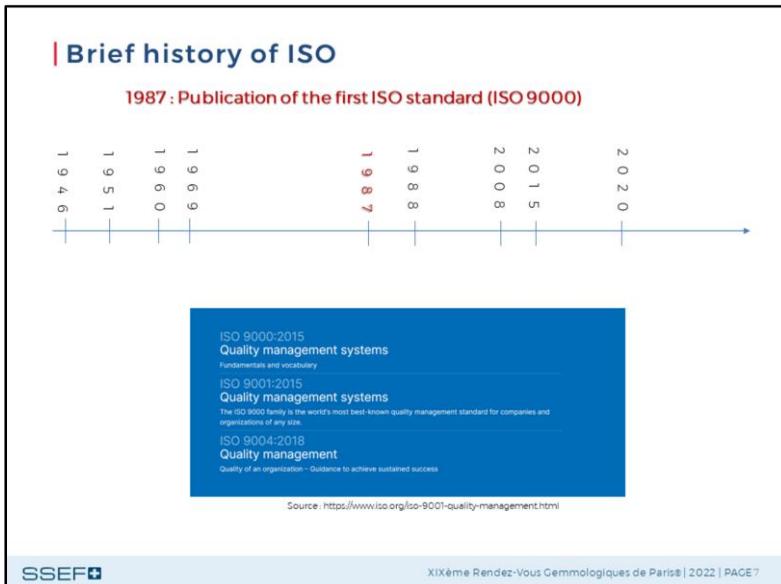
This standard is currently under revision and is in the FDIS development stage. It is now called 80000-1.



For the year 1969, I have chosen the statement of Olle Sturen, the ISO Secretary General at that time.

I quote: "**Political** nationalism will probably prevail as long as we live. **Economic** nationalism is about to disappear. And technical nationalism has disappeared!"

Globalization, which began in the 19th century with the industrial era, took off in 1969, and ISO accompanied this movement with its tools for international harmonization!



1987 is the year of the first publication of a standard of the ISO 9000 family which deals with the various aspects of quality management in companies.

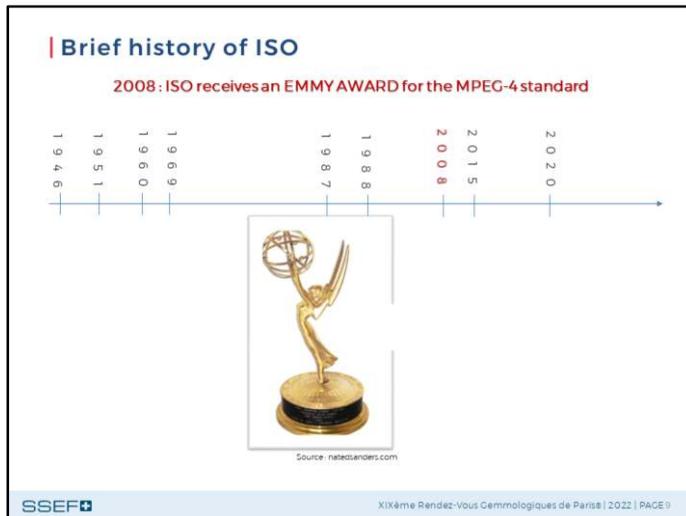
Although not mandatory, the 9001 standard has now been adopted by more than **one million** companies in over **170 countries**.



In 1988, representatives of the GIA, CIBJO and IDC met at the Dorchester Hotel in London to discuss harmonizing their diamond grading systems.

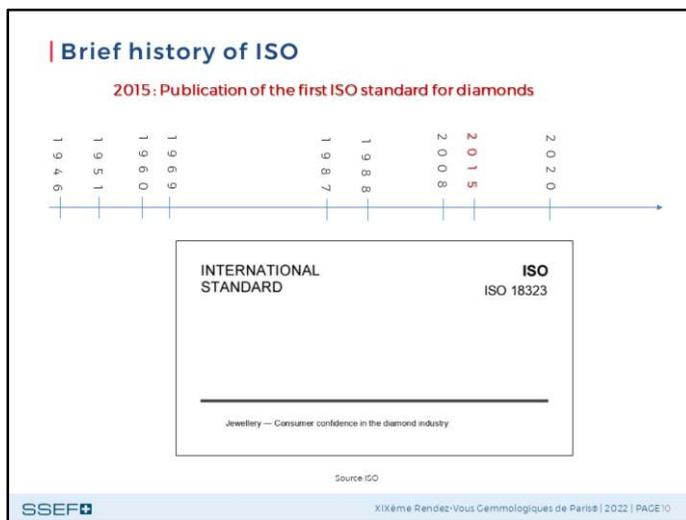
Ken Scarratt, who at that time was Director of the Gem Testing Laboratory of Great Britain, recalls that Richard Liddicoat for GIA, Dieter Hahn and Edward Asscher for IDC and Eric Poyser for CIBJO were also present at that meeting.

I will return later to the development of the ISO standard for diamond grading.



It's now August 23, 2008, in Hollywood.

Malcolm Johnson, Director of the International Telecommunication Union's Telecommunication Standardization Bureau, Scott Jameson, Chairman of the ISO/IEC Joint Technical Committee on Information Technology and representatives of the joint video team from the 3 organizations (ITU, IEC and ISO) receive an EMMY AWARD for the MPEG-4 international image compression standard which - and I quote Malcolm Johnson "is a true jewel in the crown of international collaboration in the field of standards ... It also demonstrates a sincere and unwavering confidence in the potential of international standards.



In 2015, the first ISO diamond standard was published. We will come back to this in more detail later.



Finally, in 2020, a second ISO diamond standard was published.

This international standard describes the harmonized and consensual method of grading diamonds.

Just like the previous standard, we will come back to it in more detail later.

ISO today

ISO : International Organization for Standardization:

- Non governmental,
- Independent,
- Includes 167 members which are the national standardization bodies
- 258 technical committees
- More than 24'000 published standards



Source: <https://www.iso.org/members.html>

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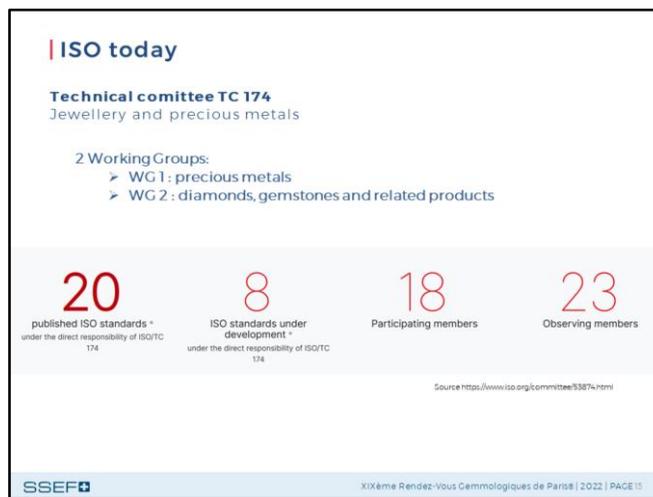
ISO today in a few figures

ISO is an answer to the question, "what is the best way to do this?"

The acronym ISO is derived from the Greek isos, which means "equal".

ISO is therefore an international organization, both :

- non-governmental
- independent,
- whose 167 member countries are represented by national standards bodies (for example, for France, the ISO member is AFNOR)
- ISO has 258 technical committees (such as food, health, energy, metals and minerals, etc.)
- ISO has now published more than 24'000 standards.



Finally, the Technical Committee that is of particular interest to us here, as it covers the jewellery and precious metals business, is TC 174.

It is, of course, the committee that manages the two diamond standards.

The secretariat of TC 174 is provided by DIN (the German Standards Association); its manager is Ms Petra Bischoff.

Dr. Jonathan Jodry is the Chairman.

Within Technical Committee 174 there are two working groups currently active:

- **WG 1 covering precious metals, and**
- **WG2 which covers diamonds, gems and any other related products**

TC 174 has already published 20 standards: 18 on precious metals and 2 on diamonds. In this committee, 18 countries are active members and 23 are observer members.

| ISO Standard 24016 - a complicated history



From left to right: Gerhard Schmidt, Ken Scarratt, Niels Ruddy Hansen, Åke Gewers, and Eric Poyser
Photo credit: K. Scarratt



From left to right: Rudi Biehler, Melanie Martin, Ken Scarratt
Photo credit: K. Scarratt



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Let us now look back at the development of the standard for diamond grading, the **current ISO standard 24016 adopted in 2020**.

In **1989**, diamond experts from GIA, CIBJO, IDC and Scan. DN (Denmark, Sweden, Norway, Finland) met for the first time under the auspices of ISO to develop the first draft of an international standard harmonising diamond grading.

Eric Poyser, then president of CIBJO, was appointed convenor of the Working Group 2 of the ISO Technical Committee TC174. Its secretariat was provided by Ken Scarratt and Melanie Martin.

The working group consisted of Ken Scarratt, Joop Heetman and Rudi Biehler (CIBJO), Tom Yonelunas and Ed Schwartz (GIA), Peter de Jong and Ronnie Geurts (IDC/HRD), Gerhard Schmidt (IDC/Idar-Oberstein Prüflabor), Åke Gewers and Niels Ruddy Hansen (Scan.d.n).

Unfortunately, 13 years later - in 2002 - and after many working sessions, the ISO FDIS (Final Draft International Standard) 11211 document submitted to the votes of the national associations members of the TC 174 committee did not receive the required number of votes. The document was therefore not adopted by ISO.

| ISO Standard 24016 – a complicated history

Graduierung geschliffener Diamanten – Teil 1: Terminologie und Klassifizierung	
Grading polished diamonds – Part 1: Terminology and classification Diamants taillés – Partie 1: Terminologie et classification	



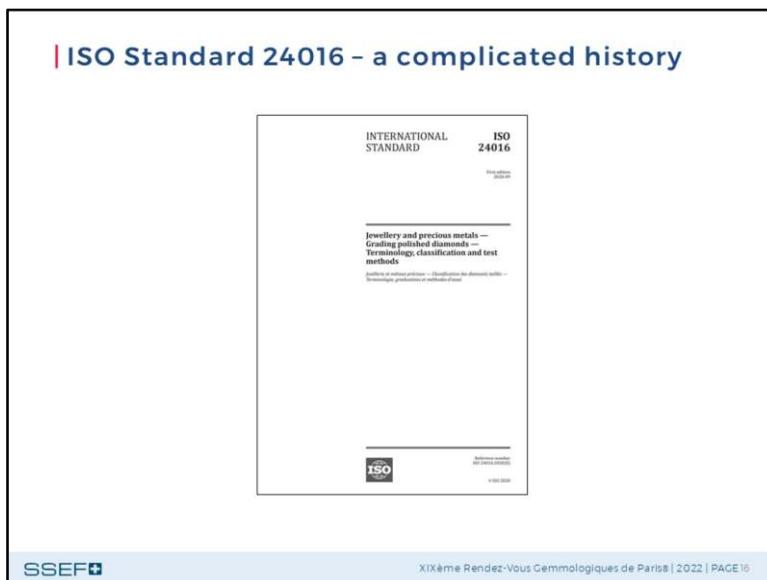
The CIBJO C1 diamond masterset Source: SSEF

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Following what must be called a setback, CIBJO through Mr. Rudi Biehler purchased the rights to the FDIS 11211 document from ISO.

In 2004, the content of this document - reflecting 13 years of harmonization work - now outside ISO, was made available to the public by CIBJO in the form of a PAS 1048 publication.

Similarly, CIBJO had made PAS 1048 the normative reference for grading of its CIBJO Diamond Book. Indeed, on this occasion, it also added its standard for colour grading of diamonds - the famous "CIBJO C1 diamond masterset series" formed in 1980.



Finally, to end this long history, in 2018, the Swiss Association for Standardization - SNV asked ISO to reopen standardization work for diamond grading.

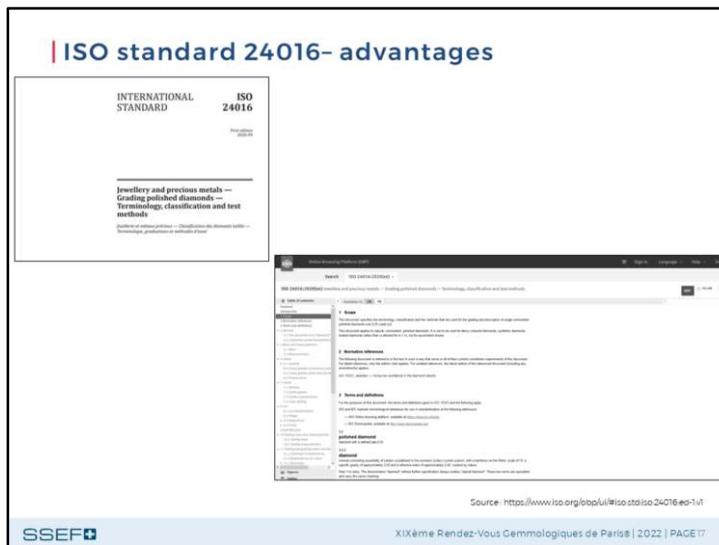
ISO obtained permission from CIBJO to use its PAS 1048 document as the basis for a new ISO Standard for diamond graduation.

In 2018, Jean-Pierre Chalain, yours truly but in this case also vice-chairman of the CIBJO diamond commission, was appointed - 19 years after Eric Poyser - as convenor of working group 2 of the technical committee TC174. His mission is to try to bring an ISO standard for diamond grading to a successful conclusion.

Some 20 diamond experts from 10 different countries updated the document. And after two working sessions, one in Berlin, the other in Paris, and several hundred intermediate consultations, a consensus was reached among international experts.

In 2020, the final document, albeit considerably updated from the original PAS 1048, was submitted to the national member associations of ISO TC 174 for a vote. This time, the **document was unanimously accepted**. It was published by ISO in 2020.

As a result, the CIBJO normative reference for diamond grading becomes ISO 24016.



What are the advantages of a standard that harmonizes the diamond grading system? First of all, it is a standard that is the result of an international consensus.

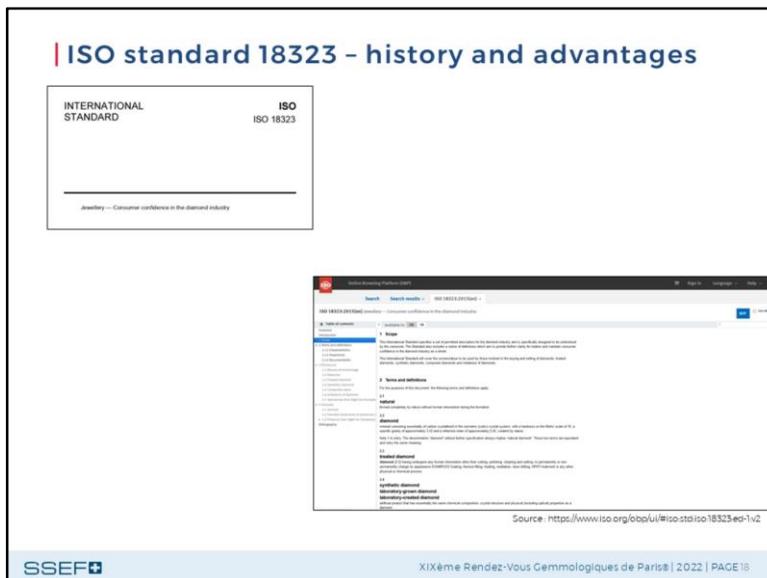
Like any ISO standard, it is a living standard, i.e. it is not fixed in time and can evolve according to the needs of the trade; it can also be improved and revised.

For the grading of the colour of diamonds, the ISO 24016 standard refers to the CIBJO C1 series of master diamonds, which has remained unchanged since 1980. This is an undeniable asset, as what other organisation gives access to the diamonds it uses as standards for colour grading?

It is a detailed standard where, in particularly difficult cases, different options are available to the person applying it.

I have cited advantages, why not cite a disadvantage?

The GIA did not participate in the drafting of the standard, although it could have, but did not. The ISO 24016 standard - the CIBJO standard - is therefore currently an international and consensual counterpart to major international laboratories, such as GIA.



The history of the ISO standard on diamond nomenclature is much simpler than 24016.

In 2008, DPA, the diamond producers' association which at the time included DeBeers, Rio Tinto, BHP Billiton and others, initiated a European standard for diamond nomenclature. It is entitled Consumer Confidence in the Diamond Industry. Synthetic diamonds have already appeared on the jewellery market and this association intended to address the nomenclature of diamonds and synthetic diamonds.

Essentially, the term 'diamond' applies only to natural diamonds. When it is synthetic - i.e. artificial as opposed to natural - it must be called (in French) "diamant synthétique". (NOTE: the original talk was given in Paris, France. For the terminology to be used in other countries, please refer to Standard ISO 18323.)

After its adoption, the European CEN standard was proposed to the members of TC174 to become an ISO standard, which was accepted without modification in 2015 and thus opened up its field of application beyond the European borders. Finally, in 2020, ISO 18323 was confirmed by TC174 in a systematic five-year review. The benefits of this standard are simple. The standard defines the terms "diamond", "synthetic diamond" and "treated diamond" and helps to clarify for consumers the abusive names that are often used on the Internet, for example.

Conclusion



- ✓ More than 24'000 standards
- ✓ International consensus-based standards
- ✓ ISO 18323 - Jewellery – Consumer confidence in the diamond industry
available here: <https://www.iso.org/standard/62163.html>
- ✓ ISO 24016 - Jewellery and precious metals – Grading polished diamonds – Terminology, classification and test methods
available here: <https://www.iso.org/standard/79795.html>

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We have already come to the conclusion of this presentation.

The more than 24,000 ISO standards harmonise international good practices by consensus.

The application of ISO standards is not compulsory, but they are now so widespread throughout the world and in so many different fields of activity that it was urgent for the diamond trade to define its own rules. This has now been done.

The ISO 18323 and 24016 standards for nomenclature and grading are specifically dedicated to diamonds and allow the consumer to have greater confidence in purchasing this magnificent natural product.

Before answering any questions you may have, I would like to thank Messrs. Scarratt, Biehler, and Lötscher as well as Dr. Cavalieri and Dr. Jodry for their tireless dedication to the development of ISO diamond standards.

| THANK YOU FOR YOUR ATTENTION

