STRATEGIC BUSINESS PLAN
ISO/TC 1

EXECUTIVE SUMMARY

Screw threads are widely used across almost every branch of industry. The ISO Technical Committee of screw threads received the number “one”. There are standardization committees for screw threads or fasteners and screw threads in most industrialized nations.

To produce screw threads, several branches of industry have evolved to serve their production: providing threading taps, thread rolling or cutting dies, thread rolling and tapping machines, thread rolling monitors, thread gauges, thread inspection equipment, calibrating laboratories of thread gauges, adhesives and coating, among others. Some branches of industry produce particular types of screw threads in large quantities: fasteners, valves, fittings, and so on.

The International Standards on screw threads usually include terms and definitions, symbols, profiles, combination of diameters and pitches, basic dimensions, tolerances and designations, gauges and gauging, etc.

The development trends in this field are more accuracy and miniaturization; more reliable gauging, strength and locking.

Implementation of ISO/TC1 standards:

- reduces costs;
- assures quality;
- remove the technical barriers and reduce the technical differences between countries;
- set up the technical foundation for the standards of other ISO/TCs/SCs.

The objectives of ISO/TC 1 can be divided into two main phases: the improvement of existing standards and the development of emerging needs.

In the first phase, update and supplement the existing standards so that they reflect current economic and industrial life, in order to facilitate trade between manufacturers and users. There are 16 International Standards to be dealt with in the first phase.

In the second phase, develop the existing and emerging standards. There are about 20 International Standards to be dealt with in the second phase.

1. INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: ISO (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of IEC (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of ITU (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 164 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the International Standard.

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its Technical Committees are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2. BUSINESS ENVIRONMENT OF THE ISO/TC

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

Screw threads have two big advantages. One is that they connect parts together, which means that designers and manufacturers can design and make highly complicated machines and equipment, thereby extending the very ability to manufacture. The other is that they can be disassembled, with the result that worn or damaged components can be replaced more easily, extending the life of the machines and equipment, and reducing the costs associated with their use and maintenance. For these reasons alone and because they are the basic element of manufacturing industry, screw threads are widely used across almost every branch of industry -- which is why the ISO Technical Committee responsible for them received the number “one” when the numbers of TCs were being handed out! There are standardization committees for screw threads or fasteners and screw threads in most industrialized nations. During World War II, for instance, the US Department of Defence directly oversaw the standardization of screw threads, establishing the General ASA (American Standards Association) War Committee on Screw Threads and in the process clearly illustrating the vital importance of screw thread standardization, in both war and peace.

To produce screw threads, several branches of industry have evolved to serve their production: providing threading taps, thread rolling or cutting dies, thread rolling and tapping machines, thread rolling monitors, thread gauges, thread inspection equipment, calibrating laboratories of thread gauges, adhesives and coating, among others. Some branches of industry produce particular types of screw threads in large quantities: fasteners, valves, fittings, and so on.

With the increase in global production and trade, ISO’s International Standards for screw threads have become increasingly important. Firstly, engineers around the world need to be able to identify screw threads correctly. There are about 500 screw threads in existence, and it is not always easy to distinguish among them! Secondly, engineers want unified basic dimensions and tolerances for screw threads, as well as the ability to check them in a uniform manner. Finally, engineers would like to see all screw thread standards conceived and set out in the same way or a similar system of technology, at least to use the same vocabulary and symbols in relation to screw threads. Only ISO’s International Standards fulfill these wants and needs. Now, many industrialized countries have adopted, or in the process of adopting, ISO International Standards on screw threads as their national standards. However, there are just 21 of these International Standards, covering only four kinds of screw threads and including a vocabulary of terms related to screw threads. For other types, such as buttress screw threads, there are no International Standards at all. Because of this shortage, engineers have the right to expect ISO/TC 1 to work actively and achieve goals on their behalf as soon as possible. At least a basic drafting platform, with a unified vocabulary, symbols, designation and technical system, should be built up by ISO/TC 1. Other TCs could then use this platform as a basis for drafting their own International Standards for special screw threads. Then, it would not only be simpler for users to understand the requirements of those special screw threads, but also the

number of different kinds of screw threads in the world could be kept to minimum. However, at present, there is not an International Standard to cover the designations and symbols applying to most kinds of screw threads. See Table 1 for special screw thread standards drafted by other ISO/IEC TCs and Table 2 for the screw threads not yet included in ISO standards.

The International Standards on screw threads usually include terms and definitions, symbols, profiles, combination of diameters and pitches, basic dimensions, tolerances and designations, gauges and gauging, etc. Without some of these basic elements for particular types, the standards cannot be used easily. For example, there are not the International Standards covering the gauges of UN and Tr screw threads. This limits the use of the International Standards.

To enable existing ISO International Standards on screw threads to play their maximum and vital role, it is first necessary to revise and supplement those that already exist. This is the current mission of ISO/TC 1. See the objectives of ISO/TC 1, first phase in 5.1.

Since each country realizes that International Standards on screw threads have a great influence on their entire industry and competitiveness in international market, it usually insists that those standards be adopted as its national standard as far as possible. So it is extremely difficult to obtain agreement from most P-member countries and takes a long time to prepare an ISO screw thread standard. The history of ISO/TC 1 shows this. It was a tough period.

After 2008 another serious problem shows up, serious shortage of experts of screw threads in many countries. Not enough experts can be sent by the P-members for the new working items, less than the minimum number required by the ISO/IEC Directives, Part 1. Some countries even have difficulty voting for screw thread standards correctly. As screw thread standards are not product standards, the experts of screw threads are difficult to get fund from industrial companies. Now only China, Germany and USA have the independent technical committees for screw threads and enough experts. Other countries invite the other TC's experts as screw thread experts, such as fastener or GPS (Geometrical Product Specifications) experts, even though screw thread is not the main subject of their interest. They just pay attention to some types of screw threads, but not the all types. See 4.2 for the guide to find the experts of screw threads.

The more modern assembly lines and electronic products that are used, the greater precision and miniature screw threads that are needed. At the same time, as the connection reliability of screw threads becomes increasingly important, the user needs more and more reliable methods to gauge screw threads, calculate their strength and lock their joints. So the development trends in this field are more accuracy and miniaturization; more reliable gauging, strength and locking. These are the bases for the long-term work of ISO/TC 1. See the objectives of ISO/TC 1, second phase in 5.1.

Table 1 – International standards related to special screw threads drafted by other TCs

Types of screw threads	TC/SC	International Standard(s)
Tapping screw thread (ST)	ISO/TC 2	ISO 1478:1999
Pressure-tight pipe threads (R)	ISO/TC 5/SC 5	ISO 7-1:1994+Cor1:2007; ISO 7-2:2000 (gauges)
No pressure-tight pipe threads(G)		ISO 228-1:2000; ISO 228-2:1987 (gauges)
Aerospace inch threads (UNJ)	ISO/TC 20/SC 4	ISO 3161:1999; ISO 15872:2017 (gauges)
Aerospace metric threads (MJ)		ISO 5855-1:1999; ISO 5855-2:1999; ISO 5855-3:1999; ISO 10959:2016 (gauges)
Tyre valve threads (V)	ISO/TC 31/SC 9	ISO 4570:2002
Gas cylinder threads (E)	ISO/TC 58/SC 2	ISO 11363-1:2018; ISO 11363-2:2017 (gauges)
Aluminum alloy drill pipe thread connection gauging (TT)	ISO/TC 67	ISO 27627:2014 (gauges)
Threads on rotary shouldered connections (NC, REG, FH, IF)	ISO/TC 67/SC 4	ISO 10424-2:2007 (threads and gauges)
Rock drilling – Left hand reverse-buttress threads and left-hand rope threads	ISO/TC 82	ISO 1721:1974; ISO 1722:1974; ISO 10208:1991
Respiratory protective threads	ISO/TC 94/SC 15	ISO 17420-3-2012 (threads and gauges)
Metal bone screws and plates - asymmetrical threads (HA, HB)	ISO/TC 150/SC 5	ISO 5835:1991
Microscopes -- Screw threads (RMS, M)	ISO/TC 172/SC 5	ISO 8038:2013
Threads for lampholders	IEC/TC 34B	IEC 60399:2004+AMD1:2008 (threads and gauges)

Table 2 -- Screw threads not yet covered by International Standard

Types of screw threads	National standards
Metric threads with transition fit	DIN 13-51:2013; GB/T 1167-1996; GOST 24834:1981
Metric threads with interference fit	DIN 8141-1:1993 (The Interference fit takes place on the major diameter); DIN 8141-2:1993 (gauges); GB/T 1181-1998 (The Interference fit takes place on the pitch diameter); GOST 4608:1981 (The Interference fit takes place on the pitch diameter)
Metric extra-fine pitch threads (Instrument industry)	GB/T 28271, 28272-2012; GOST 16967, 24706:1981
Metric thread's plan for pipes (d x P)	GB/T 1414-2013
Inch trapezoidal threads (ACME, 29º)	ASME B 1.5:1997 (threads and gauges); BS 1104:1957 (threads and gauges) There are the national standards of ACME threads in 5 countries.
Metric buttress threads (3º/30º)	DIN 513-1, -2, -3:1985; DIN 20401:2004; GB/T 13576.1, .2, .3, .4-2008; GOST 10177, 25096:1982; GOST 10278:1981 (gauges); GOST 17381:1984 (gauges) There are the national standards of metric buttress threads in 12 countries.
The basic or assistant standards for screw threads, such as -- The designation of screw threads; -- The gauging systems of screw threads;	JIS B 0123:1999 Designation system ASME B1.3:2007 The gauging systems of UN, UNR, UNJ, M, MJ threads; GB/T 37050-2019 Fastening screw thread gauging systems

Table 2 -- (continued)

Types of screw threads	National standards
-- The measurement of screw threads;	GB/T 28703-2012 Test methods for parallel screw threads; GB/T 32534-2016 Test methods for taper screw threads; JIS B 0261:2004 Parallel screw thread gauges -- Measuring method of gauges; JIS B 0262:1989 Inspection method for taper screw gauges; XP E03-110:2003 Direct measuring methods (France); EURAMET/cg-10/v.01:2007 Determination of Pitch Diameter of Parallel Thread Gauges; ASME B1.2:1983 (Appendix B) Metrology of 60 deg Screw Threads; ASME B1.5-1997 (Appendix E) Measurement of Pitch Diameter of External Acme Threads.
-- Measurement uncertainty for 60 deg. screw thread gauge;	ASME B1.25-2019 Measurement Uncertainty for Screw Thread Gauge;
-- Gauge calibration requirements and procedures	IFI-301:2008 Gauge calibration requirements and procedures for thread gauges (USA); ASME B1.2-2020 Gages and Gaging for Unified Inch Screw Threads; GB/T 28703-2012 Test methods for parallel screw threads; GB/T 32534-2016 Test methods for taper screw threads; JJF 1345-2012 Calibration for Cylindrical Thread Gauges (China); EURAMET/cg-10/v.01:2007 Determination of Pitch Diameter of Parallel Thread Gauges.
-- Blank diameters for rolling screw threads	GB/T 18685-2017 Blank diameters for M; GB/T 34632-2017 Blank diameters for UN; GOST 19256:1973 Blank diameters for M.
-- Run-outs and undercuts of screw threads, except M threads	DIN 76-3:1977 Run-outs and undercuts; GB/T 32537-2016 Run-outs and undercuts; GOST 10549:1980 Run-outs and undercuts.
-- Strength of screw threads	DIN 13-28:1975 Root Cross-sections and Tensile Stress Cross-sections; VDI 2230-1:2015 Systematic calculation of highly stressed bolted joints (Germany) BS 3580:1964 Strength of screw threads.

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

The market size for each screw thread is almost impossible to evaluate due to its vastness. The absolute fundamental nature of screw threads makes them a born prerequisite for the specification of most products within the mechanical engineering disciplines. To estimate the market value of threading tools, threading machines, thread gauges and measuring equipment, etc, is very complex too.

The world demand for screw thread products is mainly concentrated in three regions: Asia-Pacific, North America and Western Europe. In 2018, the market shares of Asia-Pacific, North America and Western Europe were about 43.4%, 21.4% and 20.1% respectively.

Note: World demand for screw thread products is estimated on the basis of information on fasteners. Threaded fasteners are typical of large quantity production. The World Industrial Fasteners report was published in 2014 by the Freedonia Group Inc.

There are many kinds of screw threads produced in large quantities, including the M, UN, BSW/BSF, Tr/ACME and G/R/NPT screw thread types. See Table 3 for the market shares of each kind screw thread.

Table 3 -- The market shares of each screw thread

Region	Fastening Threads 93%			Traversing threads 1%	Pipe Threads [5] 6%	
	M	UN	BSW, BSF	Tr and ACME [4]	G, R	NPT
Asia-Pacific [1]	81%	9%	3%	1%	3%	3%
North America [2]	15%	77%	1%	1%	1%	5%
Western Europe [2]	85%	5%	3%	1%	5%	1%
World [3]	65.3%	25.2%	2.5%	1%	3%	3%

1) The market shares of Asia mainly come from the data of China. By investigating the quantity of threading taps used to cut different kinds of screw threads, the market shares of each screw thread were estimated in China.

2) By reference of the data of Asia and the conference of CEN/TC 185 held in 2003, the market shares of North America and Europe were estimated.

3) For each screw thread
WORLD % = (ASIA % × 43.4 + AMERICA % × 21.4 + EUROPE % × 20.1) / (43.4 + 21.4 + 20.1).
The values of 43.4, 21.4 and 20.1 come from the market shares of three regions respectively.

4) The market shares of metric trapezoidal screw threads (Tr) and inch trapezoidal screw threads (ACME) are about 0.67% and 0.33% respectively.

5) The standards of pipe threads are drafted by ISO/TC 5/SC 5.

3. BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC

Implementation of ISO/TC1 standards:

- reduces costs;
- assures quality;
- remove the technical barriers and reduce the technical differences between countries;
- set up the technical foundation for the standards of other ISO/TCs/SCs.

4. REPRESENTATION AND PARTICIPATION IN THE ISO/TC

4.1 Membership

Countries/ISO member bodies that are P and O members of the ISO/TC 1

4.2 Analysis of the participation

There are 16 P-members and 24 O-members. Among the P-members, nine (56.25%) are from Europe, six (37.5%) from Asia-Pacific, one (6.25%) from North America. In the last ten years, the number of Asia-Pacific P-members has increased a lot. However, European countries still are the decisive force of ISO/TC 1.

Most of the developed and economically-transitioning countries have attended ISO/TC 1. In each group of the countries about half of them are P-members, and the others are O-members. The proportion of the developing countries in the participant is low, and most of them are the O-members.

The market share proportion between Asia, North America and Europe is about 2:1:1. While the P-member proportion between Asia, North America and Europe is 6:1:9. There is a big difference between the two proportions. Sometimes the voting in ISO/TC 1 cannot reflect the real market demand of screw threads. The way to improve this situation is to establish the working principle and strategy for ISO/TC 1. The working principle ought to be the promotion of international trade, and the international trade situation ought to decide the working program of ISO/TC 1. The strategy ought to be designed to make the work of ISO/TC 1 more efficient and successful. See the strategy of ISO/TC 1 in 5.2.

Present among the P members of ISO/TC 1 are countries that invented the oldest and most widely used screw threads, and nations with a significant fastener industry, including the UK, USA, Germany, France, Japan and China.

The participants of the screw thread committee should be drawn mainly from the manufacturers of thread gauges, threading tools, cars, airplanes, fasteners, valves and pipe fittings, the companies of calibration and thread measuring equipment, mechanical colleges, consultant firms, and related associations or institutes, etc. For each country it is better to have an expert group from the above sections. A few experts would not have enough knowledge for the works of ISO/TC 1.

5. OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 Defined objectives of the ISO/TC

The objectives of ISO/TC 1 can be divided into two main phases: the improvement of existing standards and the development of emerging needs.

In the first phase, update and supplement the existing standards so that they reflect current economic and industrial life, in order to facilitate trade between manufacturers and users. See Table 4 for details.

There are 16 International Standards to be dealt with in the first phase. The order of priority for the revision or preparation of standards is in three levels, high, normal and low.

In the second phase, the existing and emerging areas needing attention are the following. Each item's priority for the preparation of standard is in the parenthesis.

a. Metric buttress threads (Low);

b. ACME threads (Low);

c. Metric threads with transition fit (Normal);

d. Metric threads with interference fit (Normal);

e. Metric extra-fine pitch threads (High);

f. Metric thread's plan (d x P) for pipes (Normal);

g. Basic or "assistant" standards for screw threads, including

-- The designation of screw threads (Low);

-- The gauging systems of screw threads (High);

-- The measurement of screw threads (Normal);

-- Gage calibration requirements and procedures (Low);

-- Measurement uncertainty for screw thread gauge (Low);

-- Blank diameters for rolling screw threads (Normal);

-- Run-outs and undercuts of screw threads except M threads (High);

-- Strength of screw threads (Low).

See Table 2 for details. There are about 20 International Standards to be dealt with in the second phase.

Table 4 – Updating and supplementing of the existing standards

International Standards and actions	Reason and reference standards	Priority
Metric general purpose screw threads (M):		
1) ISO 68-1:1998 (Amendment) Rewrite the first paragraph of Clause 4 as following, and delete ISO 965-1 in Clause 2. *The dimensions of the basic profile, in Table 1, are derived from the following formulae*.	Design profile is the starting line of fundamental deviation, not basic profile.	1) High (2019)
2) ISO 965-1:2013 (Amendment) -- in the second paragraph of Clause 1 replace "basic profile" with "design profile", and delete "according to ISO 68-1"; -- add a note in Clause 6 as following, below the two paragraphs of the pitch diameter tolerances, and above Table 4. *The further control of thread elements, pitch, flank angle, pitch cylinder taper and roundness, runout between pitch and crest diameters, is important for accurate threads.* -- delete the late party of the paragraph below and next to the formula 17, in Clause 11, "and to take ⋯⋯ see ISO 965-3)".	Design profile is the starting line of fundamental deviation, not basic profile. For accurate threads the errors of thread elements should be controlled further. There are many ways to calculate the stress. Do not eliminate other methods.	2) High (2020)
3) ISO 965-2:1998 (Amendment) In the first paragraph of Clause 5 replace "basic profile" with "basic profile and fundamental deviation".	Correction.	3) High (2020)
4) ISO 965-3:1998 (Revision) -- delete "constructional" in the title of standard; -- replace "deviation" with "limit deviation" except "fundamental/upper/lower deviation"; -- in the first paragraph of Clause 4 replace "basic profile" with "basic profile and fundamental deviation"; -- delete the second paragraph of Clause 4 and the last column of Table 1, the minor diameter of external threads for stress calculations; -- in Table 1 add four tolerance classes, 4g, 5g4g, 8e and 9e8e, which are from Table 8 of ISO 965-1:2013.	Use the standard terms. Correction. There are many ways to calculate the stress. Do not eliminate other methods. Include all the recommended tolerance classes.	4) High (2020)
5) ISO 965-4:1998 (Revision) -- replace the text of NOTE in Clause 1 with "After the hot-dip galvanization the external threaded products shall be centrifuged immediately"; -- delete the two columns of the minor diameter for stress calculations in Tables 1 and 2, respectively; -- in the paragraph 4 of Clause 6 replace "basic profile" with "basic profile and fundamental deviation"; -- in this standard replace "deviations" with "limit deviations" except "fundamental deviations".	Add the condition of application. There are many ways to calculate the stress. Do not eliminate other methods. Correction. Use the standard terms.	5) High (2020)
6) ISO 965-5:1998 (Amendment) -- add a new paragraph 4 in Clause 6, the requirement for the actual root contour of external threads, which is the same with the paragraph 4 of Clause 6, ISO 965-4; -- in this standard replace "deviations" with "limit deviations" except "fundamental deviations".	Add information. Use the standard terms.	6) High (2020)

Table 4 -- (continued)

International Standards and actions	Reason and reference standards	Priority
7) The limits of sizes for ISO general purpose metric screw threads (New standard)	It is more convenient for users.	7) High (2021)
8) ISO 1502:1996 (Revision) -- add the information for the thread length of GO gauging member; -- add indicating thread gauges; -- in the column 2 of the Tables 4 and 5, '670' is replaced by '800'.	The thread axial length of GO gauging members affect the results of gauging. For the need of users. Include the max pitch dia. tolerances of ISO 965-1:2013, '710' and '750'.	8) Normal
ISO miniature screw threads (S): ISO 1501:2009 (Amendment) In Figure 4 replace "Φd_1" and "$T_{d1}/2$" with "Φd_3" and "$T_{d3}/2$", respectively, to change the two subscripts.	Correction.	High (2019)
Metric trapezoidal screw threads (Tr): 1) ISO 2904:1977 (Revision) -- in Clause 1 replace "basic profile" with "design profile", and add the application information of screw threads; -- add the clause of Terms and definitions; -- replace the title of Clause 4 by "Basic dimensions" and delete Table 1.	Let the four standards in same format. Correction and supplement. Supplement. Correction and no copy of the table of ISO 2901.	1) High (2019)
2) The limits of sizes for ISO metric trapezoidal screw threads (New standard)	It is more convenient for users.	2) High (2021)
3) Gauges and gauging (New standard)	Supplement.	3) Low
Unified inch screw threads (UN, UNR): 1) ISO 68-2:1998 (Amendment) The amendment is the same with ISO 68-1:1998;	Correction.	1) High (2019)
2) ISO 5864:1993 (Revision) Update the data of tolerances;	ASME B 1.1:2003/2019.	2) Normal
3) the limits of sizes (New standard);	It is more convenient for users.	3) Low
4) Gauges and gauging (New standard)	Supplement. There are the national standards of unified screw threads in 19 countries.	4) Low

5.2 Identified strategies to achieve the ISO/TC's defined objectives

ISO/TC 1 has determined that the planning of new standards and the revision of standards are to be based on the following:

- The documents are to be drafted and their priority determined according to the world demand for each screw thread. At present, the metric and inch screw threads are used in international trade. Both kinds of screw threads are needed. It is impossible to allow all inch screw threads go out of use at once. Without International Standards for inch screw threads, they will be kept for use according to national standards, such as those of ASME and BS, which is inconvenient for the user. International Standards should be allowed to play their important role in promoting international trade.

- Metric general-purpose screw threads are used in largest quantities. To extend their scope of application, miniature screw threads, metric threads with transition fit, metric threads with interference fit, metric extra-fine pitch threads and metric thread's plan for pipes should be introduced. These screw threads form a big family of metric threads.
- Establish a system of screw threads and know the goal of ISO/TC1's works. The system should include all standards for screw threads and satisfy all needs of thread production. See Figure 1 in this annex.
- The documents to include the specification of profile(s), diameter and pitch combinations, basic dimensions, tolerances and designation, gauges and gauging. These are the five basic aspects of screw threads, which form a comprehensive whole. The absence of attention to any one of these will adversely affect the use of the documents.
- For some large screw threads having many diameter and pitch combinations, those with a variety of tolerances, and which are used in larger quantities, the five basic aspects are to be covered in five International Standards or five parts of a standard respectively. This will make it easier to revise and refers to a particular aspect individually in the future.
- For screw threads used in larger quantities, it would be well to add sections on limits of size, measuring cylinders, blank diameters for rolling, run-outs and undercuts, etc, which would enable designers to choose and produce the screw threads more easily.
- Refer to existing national standards as much as possible during the preparation of an International Standard.
- Before New Items are applied for, they are discussed with the members from the European countries. Europe is a decisive force in ISO/TC 1 and many ISO standards are directly adopted as European national standards.
- If a New Work Item is very advanced and useful, and is not well known to most members, publish it in the first place as a technical specification. Let most members have enough time to get to know it.
- For each New Work Item, establish a special Working Group to prepare the document.
- The chairman and secretary of the technical committee manage the works of the technical committee, and supervise and help the works of Working Group. There is no subcommittee in ISO/TC 1 since it is believed that a complicated structure would not be helpful at present.
- Beside making full use of the sufficient experts of China, Germany and USA, we should actively help other countries improve their expert resources. For the selection of screw thread experts see 4.2. This is the base for ISO/TC 1 to work properly.

6. FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

It is considered that the known and possible major risks for the timely completion of the work programme consist of the following (in un-prioritized order).

- Many countries do not have enough experts for screw threads. It is difficult to accept the new work item proposals (NPs) for the new standards in ISO/TC 1. The minimum number of experts sent by P-members is specified in ISO/IEC Directives, Part 1.
- The extreme fundamental nature of screw threads. If a new International Standard is different from the national standard of a country, that country will incur enormous expense in adopting the International Standard. Due to the lack of consistent international standardization in the past, there has developed a wide disparity between different national standards. This makes the work of harmonization very difficult and the time to draft an International Standard long.
- Differing interests. Each industry and regional standard-developing organization has its own business interests. For example, European and Asia countries use inch screw threads less. While the North America uses the inch screw threads in large quantities.

7. STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

Information on ISO online

The link below is to the TC's page on ISO's website:

ISO TC 1 on ISO Online

Click on the tabs and links on this page to find the following information:
- About (Secretariat, Secretary, Chair, Date of creation, Scope, etc.)
- Contact details
- Structure (Subcommittees and working groups)
- Liaisons
- Meetings
- Tools
- Work programme (published standards and standards under development)

Reference information

Glossary of terms and abbreviations used in ISO/TC Business Plans

General information on the principles of ISO's technical work

ANNEX

THE SYSTEM OF SCREW THREADS IN USE TODAY

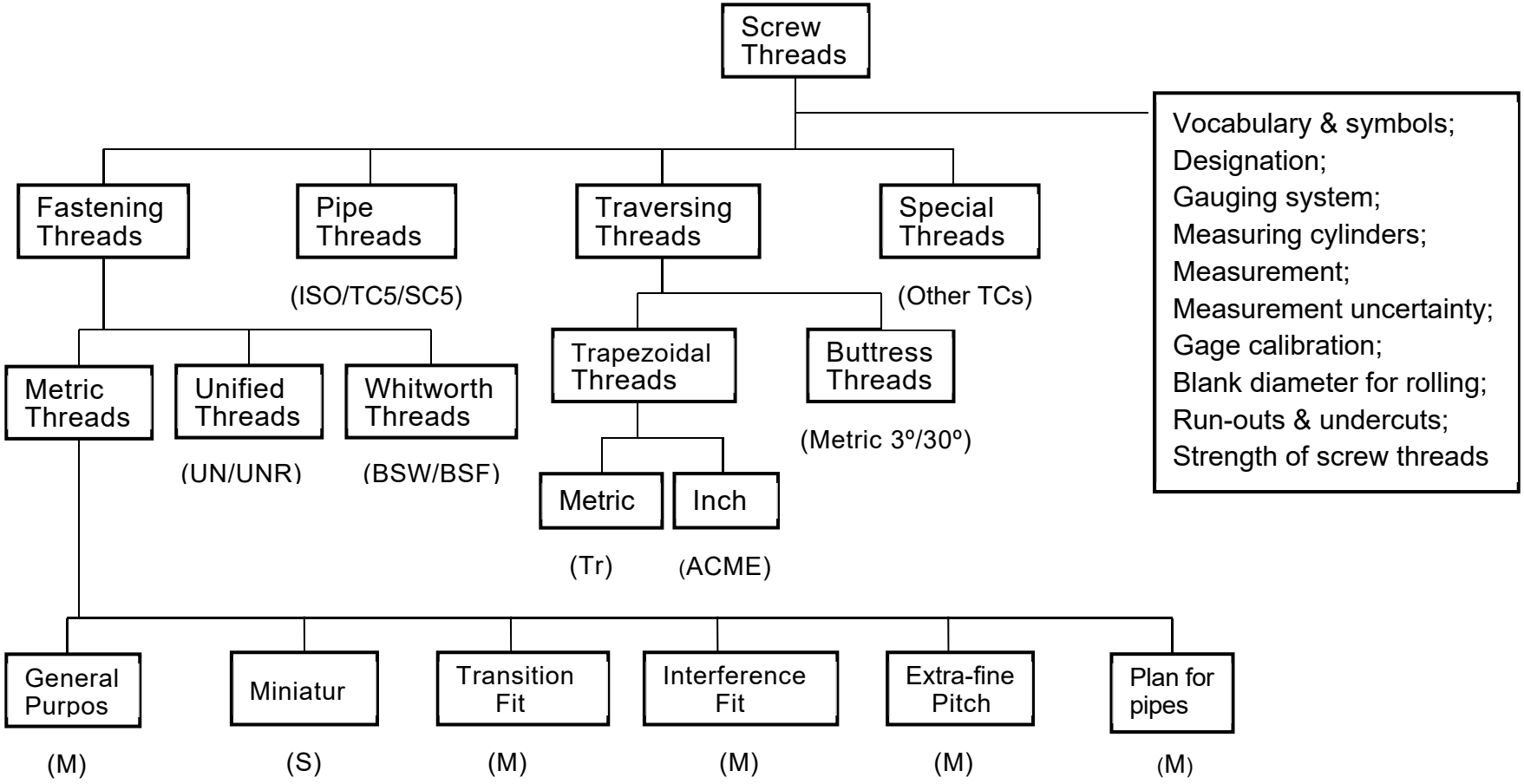

Figure 1 – The system of screw threads in use today