ISO / TC 138 MEETING REPORT

DATE OF MEETING : 12 ~ 16 OCTOBER 2015
VENUE : DIN Building, BERLIN, GERMANY

Jointly Prepared by : Zamri Mohd Said & Ir. V Subramaniam

28th Oct, 2015

DIN Offices in Berlin, Germany

Note : This report consist of 2 sections i.e Delegate’s Report, pg 1 ~ 20 & Attachment of ISO/TC138 Secretariat Report, pg 21~31.

1.0 Introduction

1.1 ISO / TC 138

ISO / TC 138 is a Technical Committee for Standardization of Pipes, Fittings and Valves and auxiliary equipment intended for the Transport of Fluids and made from all types of plastic materials including all types of reinforced plastics as well as metal fittings used with plastic pipes. This standardization includes dimensions and their tolerances, requirements for chemical, mechanical and physical properties and appropriate test methods, requirements and test methods for other properties relevant to particular applications, pressure and temperature ratings.

Chairperson : Mr. S. Fujii (Japan) & Secretary : Mr. Nakagami (JISC)

It consists of 8 sub-committees i.e.

SC 1 – Plastic Pipes & Fittings for Soil, Waste & Drainage (including land drainage)
SC 2 – Plastic Pipes & Fittings for Water Supplies
SC 3 – Plastic Pipes & Fittings for Industrial Applications
SC 4 – Plastic Pipes & Fittings for Supply of Gaseous Fuels
SC 5 – General Properties of Pipes, Fittings and Valves for Plastic Materials and their accessories
   – Test Methods and Basic Specifications

SC 6 – Reinforced Plastics Pipes & Fittings for all applications

SC 7 – Valves & Auxiliary Equipment of Plastic Materials

SC 8 – Rehabilitation for Pipeline Systems

1.2  **Organisation of ISO/TC 138 as reported by the Secretariat**
1.3 Involvement of Malaysia and Its Delegates

Malaysia through ‘Department of Standards Malaysia’ (DSM) as a ‘Permanent, P-Member’ in ISO/TC 138 was invited to attend the meeting and represented by the following delegates:

1. Ir. V. Subramanian, SYABAS / MPMA TC-2 Chairman
2. Zamri Mohd Said, PETRONAS Chemicals Group / MPMA TC-2 Committee Member

As a P-Member, Malaysian / DSM delegates through Subramaniam & Zamri had attended various sessions in ISO/TC 138 Berlin Meeting to observe the proceedings and to provide comments and also to vote on the related draft Standards.

1.4 Report Writing and Sessions attended

The following report is jointly prepared by Ir. V Subramaniam and Zamri following the proceedings of the sessions attended as well as through extraction from ‘Activity Reports’ presented by the chairpersons of respective SCs. Both of Malaysian delegates i.e. Ir. V. Subramaniam & Zamri had attended related SC / WG sessions including TC/ISO 138 Plenary Meeting as tabulated in Section 2 of the Report.

Due to the overlapping of the various sessions, both delegates had made an arrangement to attend the following sessions:

- SC 1 – Plastic Pipes & Fittings for Soil, Waste & Drainage,
- SC 2 – Plastic Pipes & Fittings for Water Supplies,
- SC 3 – Plastic Pipes & Fittings for Industrial Applications,
- SC 4 – Plastic Pipes & Fittings for Supply of Gaseous Fuels &

The report of the SCs’ attended will include Activity Report from the respective chairpersons and delegate’s observations and comments as well.

The report for the SCs’ not attended will only include Activity Report from respective chairpersons.

The full ISO Secretariat Report presented by the Technical Programme Manager (TPM) Ms. Anna Caterina Rossi is enclosed as attachment.

2.0 Arrangement of Sessions

Meeting attended by Ir. V. Subramaniam and Zamri

<table>
<thead>
<tr>
<th>Date</th>
<th>Zamri M Said</th>
<th>Ir. V. Subramaniam</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Oct</td>
<td>SC4 – AGH-1 (am/pm)</td>
<td>SC6-WG5 (am/pm)</td>
</tr>
<tr>
<td>13 Oct</td>
<td>SC1-WG4 (am)</td>
<td>SC6-WG 1 (am/pm)</td>
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<td>SC1-PL (pm)</td>
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<td>14 Oct</td>
<td>SC2-PL (am)</td>
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<tr>
<td></td>
<td>SC4-PL (pm)</td>
<td>Social Event (pm)</td>
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<td>15 Oct</td>
<td>SC3-PL (am)</td>
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<tr>
<td></td>
<td>SC5-PL (pm)</td>
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<tr>
<td>16 Oct</td>
<td>TC138-Plenary Meeting (am)</td>
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</table>
3.0 General Resolutions from ISO/TC 138

Resolution Berlin 1

ISO/TC 138 approved the appointment of Prof. Kratochvila for a six-year term as chairman of ISO/TC 138/SC 5, starting from 1st January 2016. Prof. Vanspeybroeck steps down after completing a 9 year term. The Committee thanked Prof. Vanspeybroek for his service.

Resolution Berlin 2


Additional Notes: Venue & Schedule for future ISO/TC 138 meetings

<table>
<thead>
<tr>
<th>Year</th>
<th>Location &amp; (ISO)</th>
<th>City</th>
<th>Dates</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Japan (JISC)</td>
<td>Kyoto</td>
<td>17 – 21 Oct</td>
<td>Outside Europe</td>
</tr>
<tr>
<td>2017</td>
<td>Switzerland (SNV)</td>
<td>Solothum</td>
<td>9 – 13 Oct</td>
<td>Europe</td>
</tr>
<tr>
<td>2018</td>
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<td>Outside Europe</td>
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<tr>
<td>2019</td>
<td>TBA ?</td>
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<td></td>
<td>Europe</td>
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Observations and Comments:

- Resolutions accepted by all members including Malaysian delegates.
## Activity Report from Sub Committees

### 4.1 Activity Report from SC 1 – Plastics Pipes & Fittings for Soil, Waste & Drainage

<table>
<thead>
<tr>
<th>ISO/TC138/SC1 Chairman</th>
<th>Mr Michel Divanach (France)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary</td>
<td>Ms Karine Dari (AFNOR, France)</td>
</tr>
<tr>
<td>Number of active WG’s</td>
<td>2</td>
</tr>
<tr>
<td><strong>Title of SC:</strong></td>
<td>“Plastics pipes and fittings for soil, waste and drainage (including land drainage)”</td>
</tr>
</tbody>
</table>

**Meeting held in/on:** Berlin 2015-10-13

**Number of P-Member Countries present:** 20 P-Members

Australia, Austria, Brazil, Canada, China, Chile, Colombia, Finland, France, Germany, Israel, Japan, Republic of Korea, Malaysia, Mexico, Netherlands, Norway, Switzerland, UK, United States of America

**Number of Observer Countries present:** Kenya

### SC1 document overview and progress since last meeting:

- Total number of published documents: 53
- Number of active work items: 5
- Published documents since last meeting: 0
- Items in FDIS stage: 0
- Items in DIS stage: 1
- Items in NP and/or CD stage: 4
- Deleted documents: 0
- Number of pre WI 1
- Confirmed during systematic review: 17
- For revision out of systematic review: 0

**General information of SC1:**

Actually SC1 has 34 "P" Members and 17 "O" Members. Brazil (ABNT), Canada (SCC), United Arab Emirates (ESMA), Mexico (DGN) are new P-members
Observations and Comments:

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- One of the interesting proposal is to include 'jointing' system guideline in the standard. We looking forward of this proposal as it will further enhance the integrity of the whole piping system.
4.2 Activity Report from SC 2 – Plastics Pipes and Fittings for Water Supplies

<table>
<thead>
<tr>
<th>ISO/TC138/SC2</th>
<th>Chairman: Mr Urs Amacher (Switzerland)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary:</td>
<td>Ms Ruth Schneider (SNV, Switzerland)</td>
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</tbody>
</table>

**Number of active WG's:** 3

**Title of SC:** Plastics pipes and fittings for water supplies

<table>
<thead>
<tr>
<th>Meeting held in/on:</th>
<th>Berlin / 2015-10-14 (morning)</th>
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<tbody>
<tr>
<td>Number of ISO Members, Affiliates, Observers present:</td>
<td>65</td>
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<tr>
<td>Number of Member Countries present:</td>
<td>24</td>
</tr>
</tbody>
</table>

**General information of SC 2:**
- Actually SC 2 has 32 "P" Members and 23 "O" Members:
  New P-Members: Brazil (ABNT), Mexico (DGN) and United Arab Emirates (ESMA).
  New O-Members: Serbia (ISS) and Zimbabwe (SAZ).
- WG 2 (Plastics piping systems for irrigation) was disbanded by ISO/CS on 31.03.2015.
- SC 2 agreed the re-appointment of Mr Michel Divanach from France as WG 4 Convenor for another term of 3 years (see RESOLUTION 428/2015).

**Progress of work in WG 1:** (Plastics piping systems for hot and cold water applications)
- ISO 15874-2, -3 and -5 (Hot and cold water – PP), NP from Italy to extend the dimension range up to 400 mm, WI approved on 10th September 2013, on the request of Italy the project was moved to the extended timeframe (48 month) by ISO/CS.
- ISO/TS 15874 - 15877 and 22391 (Hot and cold water – parts 7), revision work started under CEN lead, NP approved on 07.06.2015.
- ISO 15876-series (Hot and cold water – PB), integration of PB-R, SC 2 Resolution 414/2012 proposed to CEN/TC 155 to take the lead for the revision. In its 2012 November meeting CEN/TC 155 accepted this proposal (DECISION 1150), DIS approved on 27.09.2015.

**Progress of work in WG 3:** (PVC piping systems for water supply)
- No ongoing projects.
Observation and Comments:

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- We will follow-up on the multi layer pipes standard as a guideline for our TC-2 current working group progress in developing MS for Multi Layer pipes.
- We had consulted few experts in this field like Mr. Steeve Beech from UK and Japanese delegates to share more information especially on MRS analysis for the whole pipes. The reference quoted by experts are JAS K 9798:2006, ISO 17456 (Regression Analysis), ISO 21004 (Multi layer pipe for water supply) and ISO 21003 (Multi layer pipe for hot & cold water supply).
- We also interested to know more about PE100 RC test method i.e to assess ‘Resistant to Crack’ performance of pipe.
4.3 Activity Report from SC 3 – Plastics Pipes and Fittings for Industrial Applications

Summary report of ISO TC 138/SC3 "Plastics pipes and fittings for industrial applications" for the ISO TC 138 plenary meeting on 15 October 2015 in Berlin (Germany)

ISO TC 138/SC3 met on 15 October 2015, in Berlin. 9 Countries with 22 delegates, were present in the meeting.

About the items of SC3:
- ISO 15494, Plastics piping systems for industrial applications — Polybutene (PB), polyethylene (PE), polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X), polypropylene (PP) — Metric series for specifications for components and the system, was published on 2015-10-1

- ISO 10931:2005 / Amd 1, Plastics piping systems for industrial applications - Poly(vinylidene fluoride) (PVDF) -- Specifications for components and the system, was published on 2015-07-09

- ISO 15493:2003/CD Amd 1, Plastics piping systems for industrial applications - Acrylonitrile-butadiene-styrene (ABS), unplasticized poly(vinyl chloride) (PVC-U) and chlorinated poly(vinyl chloride) (PVC-C) - Specifications for components and the system - Metric series, closed the voting period on: 2015-08-27. No comments had been casted and the CD was forwarded to DIS

A delegate from Japan presented a study for PE piping systems reinforced with glass fibres. Data on the regression curves will be probably ready after the middle of 2016. A New Work Item Proposal may follow on the subject and a new working group on the purpose could be formed.

ISO TC 138/SC3 supports the proposal to specify the scope of ISO TC 138 for the jointing of plastics piping systems.

The chairmanship of ISO TC 138/SC3 at the end of 2015 will expired after 9 year continued service.
Italy is going to propose Mr. Oleg Clericuzio as the new chairman for ISO TC138/SC3

The next meeting will be held in 2016 in Japan during the period of the others ISO TC 138 SCs, information will be communicated.

Observations and Comments:

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- Japan delegate had proposed to develop new standard for new material i.e. PE-GF pipe. This is a compound of Polyethylene and Glass Fiber material and will increase pipe strength up to PE200 class. The result of full MRS study will be presented in the next year TC138 meeting in Kyoto.
- We are very interested to follow-up on this development as the material may contribute positively towards the Malaysia pipe industry as well.
4.4 Activity Report from SC 4 – Plastics Pipes and Fittings for Supply of Gaseous Fuels

Title of SC: Plastics Pipes and Fittings for the Supply of Gaseous Fuels
Chairman: Ernst van der Stok (Kiwa Technology, Netherlands)
Secretary: Bert Wikkerink (Kiwa Technology, Netherlands)

Last meeting: 14 October 2015, Berlin, Germany 57 participants (21 P-member countries)

ISO/TC138/SC4 has 31 P-members and 19 O-members. There are 37 published standards under the direct responsibility of ISO/TC138/SC4 and 2 standards are currently under development.

Progress of work:
Since the last ISO/TC138 Plenary meeting last year in in Seoul, Rep. of Korea, ISO/TC138/SC4 met once on 14 October 2015 in Berlin, Germany. The following decisions of importance to TC138 were taken during that meeting:

SC4 decided to confirm ISO 12176-4 ‘Plastics pipes and fittings – Equipment for fusion jointing polyethylene systems – Part 4: Traceability’. The resolution was taken by unanimity.

SC4 decided to ask ISO/TC138/SC4 WG2 to start a study to investigate the need for an additional part of ISO 12176 'Plastics pipes and fittings – Equipment for fusion jointing polyethylene systems' as a new WI, which involves new technologies regarding traceability coding. The resolution was taken by unanimity.

SC4 decided to change the status of the ISO/TC138/SC4 Ad-Hoc Group 1 (AHG1) ‘Natural Compound and Non-Black Coloured Masterbatch Pipes’ into Working Group 10 (WG10) of ISO/TC138/SC4, to be convened by Mrs. Sarah Patterson, and to register the project ‘Buried polyethylene (PE) pipes for the supply of gaseous fuels - Use of natural compound and non-black coloured masterbatch – specifications’ as a preliminary work item (PWI) within this new SC4 WG10. The resolution was taken with 9 approvals, 8 disapprovals and 4 abstentions.

SC4 decided to support the revision of the scope of ISO/TC138 to cover explicitly any kind of jointing technology between pipes and/or fittings, and the assessment of the properties of the resulting joints. The resolution was taken by unanimity.

SC4 decided to have a liaison between ISO/TC138/SC4 and ISO/TC138/SC8 WG4 ‘Plastics piping systems for rehabilitation of underground gas supply networks’ and Mrs S. H. Kil was nominated to fulfill this request. The resolution was taken by unanimity.
Observations and Comments:

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- There was a lengthy discussion on the topic of ‘compounded resin’ and ‘natural compound & non-black masterbatch’ for gas pipe production. WG10 has been formed to manage this issue and members will be updated in timely manner.
- We are of the view NOT to support this move as we will adhere to our current MS 1086 which only allow ‘compounded resin’ being used by Pipe manufacturer instead of using Natural compound with masterbatch.


21 P-member countries and 1 O-member country were present at the meeting. During the meeting, it was announced that Mr Vanspeybroeck will end his Chairmanship after a nine-year-term. SC 5 confirmed acceptance of the nomination of Prof. Kratochvila for a six-year term as new Chairman of ISO/TC 138/SC 5, starting from the 1st January 2016 and requests ISO/TC 138 to accept this nomination today.

Progress of the WG’s was reported by the WG convenors.

WG 05 Polyolefin pipes (Convenor: Mr Beech)
WG 5 has the following active WI’s:
- Revision of ISO 8259-1 and ISO 8259-3 – the revised methods have been published this year.
- Revision of ISO 13761 Temperature derating for PE – The document was agreed for CD vote which resulted in a 100% positive vote with 5 abstentions.
- Revision of ISO 6964 Carbon black content – the group have been working on this document to incorporate automated methods as recommended by Spain
- ISO 18553 Dispersion – preparation of test specimens from pipes is to be discussed

WG 12 Polyolefin pipe fitting assemblies (Convenor: Mr Vanspeybroeck)
Work within this WG will start in 2016. One of the preliminary WI’s will be investigating the possible revision of ISO 11413 Error! Reference source not found..

WG 17 Alternative test methods (Convenor: Mr Choi)
A second ballot for ISO/DTR 16943 will start soon. The WG has been working on 4 preliminary WI’s. Continuation of these WI’s will be part of the work program of WG 17 for the coming year.
Observations and Comments:

- Resolutions accepted by all members including Malaysian delegates.
- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- We are very interested to follow-up the development of ISO 18553 – pigment dispersion test method. PE Plastic pipe in Malaysia had recorded many failures and one of the factors is due to production of substandard pipe. Simple test to detect defective pipe is through ‘dispersion test’. Revised test method will provide better accuracy of QC.
4.6 Activity Report from SC 6 – Reinforced Plastics Pipes and Fittings for all applications

<table>
<thead>
<tr>
<th>ISO/TC 138/SC6</th>
<th>Reinforced plastics pipes and fittings for all applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairperson</td>
<td>Thomas Simoner (Austria)</td>
</tr>
<tr>
<td>Secretary</td>
<td>ASI, Jochen Fornather</td>
</tr>
<tr>
<td>Number of active WG</td>
<td>3: WG 1, WG 3 and WG 5</td>
</tr>
</tbody>
</table>

Meeting(s) held since the last ISO/TC138 meeting: 2015-10-15
Number of P-members / O-Members: 24 / 20
Average number of ISO Members, Affiliates, Observers present: 10
Number of published standards/ active WGs: 35 / 17
Progress on work items (examples):
- DIS 8513 (Longitudinal Tensile Strength test): direct publication
- ISO/CD 12512 (Segment test): convert from ISO to ISO/TS
- SR of ISO 15306 (Cycling test): confirmation
- SR of ISO 10471 (Ring deflection – wet conditions): revision
- ISO/WD 10639 (Water supply): sent directly to DIS
- ISO/WD 10467 (Drainage and sewerage): move to preliminary stage
- ISO/CD 16611 (Non-circular pipes and joints): sent to DIS
- ISO/TS 20856-1 (Design – Buried Pipes): sent directly to DTS

Observations and Comments:

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- There were lengthy discussions on design requirements/parameters for support/cradle as well as maximum support spacing. Further comments will be sought and discussed further during next year’s meeting.
- The document will be more generic instead of being product specific.
- ISO 14828 : 2003 on “Glass reinforced thermosetting plastics (GRP) pipes – Determination of the long-term specific ring relaxation stiffness under wet conditions and calculation of the wet relaxation factor” is proposed to be withdrawn. This is covered under ISO 10468 :2003 which relates to creep stiffness and wet creep factor.
4.7 Activity Report from SC 7 – Valves and Auxiliary Equipment of Plastic Material

Summary report of ISO TC 138 / SC 7 "Valves and auxiliary equipment of plastics materials" for the ISO TC 138 plenary meeting on 2015-10-16 in Berlin (Germany)

ISO TC 138/SC7 met on 15 October 2015, in Berlin. 9 Countries with 15 delegates were at the meeting.

ISO 4437-4, Plastics piping systems for the supply of gaseous fuels – Polyethylene- Part 4: Valves, was published on 2015-03-25. Some late issues from NBN has been discussed without the need to decide for further actions.

ISO TC 138/SC7 discussed the comments generated by the enquiry of ISO DIS 16486-4" Plastics piping systems for the supply of gaseous fuels -- Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing -- Part 4: Valves" closed on 2015-06-09. A text will be prepared for FDIS.

The comments for the ISO Systematic Reviews in 2015 of ISO 16135, ISO 1616, ISO 16137, ISO 16138, ISO 16139, ISO 21787 were examined. It was resolved to confirm the 6 standards for the industrial valves of thermoplastics materials. If delegates through their National Standards Bodies will request Amendments on these standards, ISO TC 138/SC7 will activate the necessary procedures.

The next meeting will be held in 2016 in Japan. Information on the date and place for the next meeting will be communicated.

Observations and Comments :

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- No additional info to add as we did not attending the meeting.
4.8 Activity Report from SC 8 – Rehabilitation for Pipeline System

Title of SC: Rehabilitation of Pipeline Systems
Chairman: Dr John Gumbel (UK)
Secretary: Yoritaka Yamauchi (JISC, Japan)

Meetings held since last TC138 Plenary: 1 in Berlin, Germany, 2015-10-15
Attendance: 19 delegates, and 12 observers, from total 20 countries
Total membership: 25 P-members – one new (United Arab Emirates) added in Apr. 2015

Active work items
The following three work items have passed CD ballot and been updated from comments received, and will be registered for DIS by 2015.11.30.
ISO/CD 11296-2 “Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks — Part 2: Lining with continuous pipes”
ISO/CD 11297-2 “Plastics piping systems for renovation of underground drainage and sewerage networks under pressure — Part 2: Lining with continuous pipes”
ISO/CD 11298-2 “Plastics piping systems for renovation of underground water supply networks — Part 2: Lining with continuous pipes”

The following work item has been prepared for launching CD ballot by 2015.11.30.
ISO/WD 11297-4 “Plastics piping systems for renovation of underground drainage and sewerage networks under pressure — Part 4: Lining with cured-in-places pipes”

The activation of a new work item for revision of ISO 11295 Classification and information on design and applications... has also been approved by NWIP ballot and the draft has been prepared by WG1 for registration as CD.

Proposed new work items
It has been decided to revise all published renovation standards in parallel to reflect the addition of further techniques within the scope of SC8 and to bring requirements across application area and technique families into line as far as possible.
In addition, PWIs have been assigned to six new parts of renovation standards that it is planned to develop.
These are summarized in the table on the next page.

For trenchless replacement it has been decided, following ad-hoc ballot which confirmed acceptance of a common standard for all application areas, to proceed with NWIP for development of the following two items:
Plastics piping systems for the trenchless replacement of underground pipeline networks
- Part 1: Replacement on the line by pipe bursting and pipe removal
- Part 2: Replacement off the line by horizontal directional drilling and impact moleing

Development by WG5 of a possible Part 3: Replacement off the line by pipe jacking has been deferred, as existing ISOS 25780 and 18672 already cover jacking applications of GRP and PRC pipes respectively.
Observation

- We will review and vote accordingly when all the draft standards are circulated for members review, comment and voting.
- No additional info to add as we did not attending the meeting.
5.0 General Observations, Conclusion & Recommendations

The involvement and presence of Malaysian delegates in the ISO/TC 138 Meeting in Berlin had given us the opportunity to follow the development of new/draft standards, amendment of existing standards, and development of new material, processes, technologies and test methods in the plastics pipes and fittings industry.

It is important to understand standardization and to know in detail the development of standards to help put forward positive and substantive comments as well as voting as a Permanent Member and adoption of these standards. Networking, connection and intellectual conversation with experts in the related fields from various organizations and countries will also develop our capability and exposure to the development in this field internationally. Hence it is important for Malaysia to continue participating in all TC 138 meetings to build close rapport with the international community and to take up an active role in specific Sub-Committees and Working Groups. This will also help Malaysia face challenges ahead in the water and wastewater industry including drainage.

We hope DSM / MPMA will continue to be involved and sending delegates to the meeting scheduled next year in Kyoto Japan 2016. We must continuously push ahead to be at par with other developed countries like Japan, Korea, China, US and EU in this field of standardization.

Last but not least, we would like to express our sincere thanks to MPMA & DSM for giving us opportunity to represent Malaysia and DSM in ISO/TC 138 Meeting in Berlin 2015. We will continue to do our best to play an active role in developing and improving best practices and standardization in Malaysia related to Plastics Pipes & Fittings.

Jointly Prepared by:

ZAMRI MOHD SAID
IR. V SUBRAMANIAMS

Date : 28th Oct 2015
ATTACHMENT

ISO SECRETARIAT REPORT ISO/TC 138
1 – ISO/TC 138/SC 1 Organisation

ISO/TC 138/SC 1
Plastics pipes and fittings for soil, waste and drainage (including land drainage)
Tubes et raccords en matières plastiques pour évacuation et assainissement (y compris le drainage des sols)

SCOPE: Standardisation of pipes and fittings for soil, waste and drainage and made from all types of plastic materials. This standardisation includes - for pipes and fittings - dimensions and their tolerances, requirements for chemical, mechanical and physical properties and appropriate test methods, requirements and tests methods for other properties relevant to particular applications, temperature and pressure ratings.

Chairman: Mr Philippe DIVANACH (France) - Since March 2014
Secretariat: Mrs Karine DARI (AFNOR) karine.dari@afnor.org

WG 1
Discharge systems inside building
Systèmes d’évacuation à l’intérieur des bâtiments

Convenor: Mr Georg TAUBERT

WG 4
Plastics piping systems for underground drainage and sewerage (previous title: Solid wall piping systems for buried applications: (resolution 369))
Systemes de canalisations en plastique pour branchements et collecteurs d'assainissement enterrés

Convenor: Mr Peter VERLAAN

WG 6 (dormant)
Conversion of EN test methods of general interest to ISO test methods (resolution 381)
Transposition des méthodes d’essai EN présentant un intérêt général en méthodes d’essai ISO

Convenor: Mr Alain GENTY

Parent International Technical Committee:
ISO/TC 138 Plastics pipes, fittings and valves for the transport of fluids

Chairman: Mr Shigeki Fuji (Japan)
Secretariat: JISC (Japan) - Mr. Akira Nakagami nakagami@jpif.gr.jp
## 2 – Membership

### 2.1 - Participating members – P-members (32)

<table>
<thead>
<tr>
<th>Country</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>SA - Standards Australia International Ltd</td>
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<tr>
<td>Austria</td>
<td>ASI - Austrian Standards Institute</td>
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<tr>
<td>Belgium</td>
<td>NBN - Institut Belge de Normalisation</td>
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<tr>
<td>Brazil</td>
<td>ABNT - Associação Brasileira de Normas Técnicas</td>
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<tr>
<td>Chile</td>
<td>INN- Instituto Nacional de Normalización</td>
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<tr>
<td>China</td>
<td>SAC - Standardization Administration of China</td>
</tr>
<tr>
<td>Colombia</td>
<td>ICONTEC - Instituto Colombiano de Normas Técnicas y Certificación</td>
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<tr>
<td>Czech republic</td>
<td>UNMZ - Czech Office for Standards, Metrology and Testing</td>
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<tr>
<td>Denmark</td>
<td>DS –Danish Standard Foundation</td>
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<td>Finland</td>
<td>SFS - Finnish Standards Association</td>
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<td>France</td>
<td>AFNOR - Association Française de NORmalisation</td>
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<tr>
<td>Germany</td>
<td>DIN - Deutsches Institute für Normung</td>
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<td>Hungary</td>
<td>MSZT - Magyar Szabványgyűl Testület</td>
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<td>Islamic Republic of Iran</td>
<td>ISIRI - Institute of Standards and Industrial Research of Iran</td>
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<td>NDAI - National Standards Authority of Ireland</td>
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<td>Israel</td>
<td>SI - Standards Institute of Israel</td>
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<td>Italy</td>
<td>UNI – Nazionale Italiano di Unificazione</td>
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<td>Japan</td>
<td>JISC - Japanese Industrial Standards Committee</td>
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<td>DGM - Department of Standards Malaysia</td>
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<td>NEN - Nederlands Normalisatie-Instituut</td>
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<td>Poland</td>
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<td>GOST R - Federal Agency on Technical Regulating and Metrology</td>
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<td>Sweden</td>
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<td>SNV - Association suisse de normalisation</td>
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<td>Thailand</td>
<td>TISI - Thai Industrial Standards Institute</td>
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<td>United Arab Emirates</td>
<td>ESMA - Emirates Authority for Standardization and Metrology</td>
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2 new P-members: Brazil, United Arab Emirates

### 2.2 - Observer members – O-members (18)

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<tr>
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<td>BSTI - Bangladesh Standards and Testing Institution</td>
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<td>Belarus</td>
<td>BELST - State Committee for Standardization of the Republic of Belarus</td>
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<td>Cyprus</td>
<td>CYO - Cyprus Organization for Standardization</td>
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<td>Greece</td>
<td>NOGIS ELOT - Hellenic Organization for Standardization</td>
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<td>Iceland</td>
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<td>India</td>
<td>BIS - Bureau of Indian Standards</td>
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<td>Mexico</td>
<td>DGN - Direcção General de Normas</td>
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<td>Morocco</td>
<td>IMANOR- Service de Normalisation Industrielle Marocaine</td>
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<tr>
<td>Portugal</td>
<td>IPQ - Instituto Português da Qualidade</td>
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<td>Romania</td>
<td>ASRO - Asociațiea de Standardizare din România</td>
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<td>Saudi Arabia</td>
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<td>Serbia</td>
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<td>Singapore</td>
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<td>SUTN - Slovak Standards Institute</td>
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<td>Sri Lanka</td>
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<td>United Republic of Tanzania</td>
<td>TBS - Tanzania Bureau of Standards</td>
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<td>Tunisia</td>
<td>INNORPI - Institut National de la Normalisation et de la Propriété Industrielle</td>
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<tr>
<td>Turkey</td>
<td>TSE - Türk Standartları Enstitüsü</td>
</tr>
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</table>
1 new O-member: Serbia

2.3 - International Standardisation Organisation

The ISO Technical Program Manager in charge in ISO Central Secretariat of our field of standardization is Mrs Anna Caterina ROSSI rossi@iso.org.

2.4 – Non official liaison

In order to ensure the consistency of ISO/TC 138/SC 1 standards and drafts in development, work undertaken by CEN/TC 155 "Plastics piping systems and ducting systems" is follows. A presentation is made at each plenary meeting by Mr. Dragaun.

3 - Meetings – Attendance

3.1 - Date & place of the plenary meetings

<table>
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<tr>
<th>Date</th>
<th>Place</th>
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<td>Seoul (Korea)</td>
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<td>27th October 2008</td>
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<td>29th October 2007</td>
<td>Seoul (Republic of Korea)</td>
<td>Minutes N 996 – Resolutions N 997</td>
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### Attendance to the plenary meetings

These data do not take into account both Chairmanship and Secretariat of ISO/TC 138/SC 1 nor ISO/CS representative.

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4 – Standardisation under ISO/TC 138/SC 1 responsibility

4.1 – Publications

35 standards under ISO/TC 138/SC 1 responsibility were published.

- **ISO 265-1:1988**
  Pipes and fittings of plastics materials -- Fittings for domestic and industrial waste pipes -- Basic dimensions: Metric series -- Part 1: Unplasticized poly(vinyl chloride) (PVC-U)
  Tubos y raccords en matières plastiques -- Raccords pour canalisations d'évacuations domestiques et industrielles -- Dimensions de base : Série métrique -- Partie 1 : Poly(chlorure de vynyle) non plastifié (PVC-U)

- **ISO 3633:2002**
  Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Unplasticized poly(vinyl chloride) (PVC-U)
  Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments -- Poly(chlorure de vynyle) non plastifié (PVC-U)

- **ISO 4435:2003**
  Plastics piping systems for non-pressure underground drainage and sewerage -- Unplasticized poly(vinyl chloride) (PVC-U)
  Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement enterrés sans pression -- Poly(chlorure de vynyle) non plastifié (PVC-U)

- **ISO/TS 7024:2005**
  Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Thermoplastics -- Recommended practice for installation
  Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments -- Thermoplastiques -- Pratiques recommandées pour la pose

- **ISO/TR 7074:1986**
  Performance requirements for plastics pipes and fittings for use in underground drainage and sewage
  Aptitude à l'emploi des tubes et raccords en matière plastique utilisées pour l'assainissement enterré

- **ISO 7671:2003**
  Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Polypropylene (PP)
  Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments -- Polypropylène (PP)

- **ISO 7675:2003**
  Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Chlorinated poly(vinyl chloride) (PVC-C)
  Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments -- Poly(chlorure de vynyle) chloré (PVC-C)

- **ISO 7682:2003**
  Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Acrylonitrile-butadiene-styrene (ABS)
  Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments -- Acrylonitrile-butadiène-styrene (ABS)

- **ISO 8283-1:1991**
  Plastics pipes and fittings -- Dimensions of sockets and spigots for discharge systems inside buildings -- Part 1: Unplasticized poly(vinyl chloride) (PVC-U) and chlorinated poly (vinyl chloride) (PVC-C)
  Tubes et raccords en matières plastiques -- Dimensions des emboutures et des bouts mâles pour raccordement de tubes et raccords dans les systèmes d'évacuation à l'intérieur des bâtiments -- Partie 1 : Poly(chlorure de vynyle) non plastifié (PVC-U) et poly(chlorure de vynyle) chloré (PVC-C)
ISO 13259:2010
Thermoplastics piping systems for underground non-pressure applications — Test method for leak tightness of elastomeric sealing ring type joints
Systèmes de canalisations thermoplastiques pour applications enterrées sans pression — Méthodes d'essai d'étanchéité des assemblages à bague d'étanchéité en élastomère

ISO 13260:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage - Test method for resistance to combined temperature cycling and external loading
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Méthode d'essai de la résistance à un cycle de température et de charge externe combinés

ISO 13262:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics spirally-formed structured-wall pipes — Determination of the tensile strength of a seam
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Tubes thermoplastiques à paroi structurée enroulés en hélice — Détermination de la résistance en traction de la ligne de soudure

ISO 13263:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics fittings -- Test method for impact strength
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Raccords thermoplastiques — Méthode d'essai de résistance au choc

ISO 13264:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics fittings — Test method for mechanical strength or flexibility of fabricated fitting
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Raccords thermoplastiques — Méthodes d'essai de la résistance mécanique ou de la flexibilité des raccords façonnés

ISO 13265:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Joints for buried non-pressure applications — Test method for the long-term sealing performance of joints with elastomeric seals by estimating the sealing pressure
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Assemblages pour applications enterrées sans pression — Méthode d'essai de la performance à long terme des assemblages avec garnitures d'étanchéité en élastomère par l'estimation de la pression d'étanchéité

ISO 13266:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics shafts or risers for inspection chambers and manholes — Determination of resistance against surface and traffic loading
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Éléments de réhausse thermoplastiques pour boîtes d'inspection et de branchements ou regards — Détermination de la résistance aux charges de remblai et de circulation
Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics inspection chamber and manhole bases — Test methods for buckling resistance
Systèmes de canalisations thermoplastiques pour branchements et collecteurs d'assainissement enterrés sans pression — Éléments de fond de boîtes d'inspection et de branchements et de regards thermoplastiques — Méthode d'essai de résistance au flambage

Thermoplastics piping systems for non-pressure underground drainage and sewerage — Thermoplastics shafts or risers for inspection chambers and manholes — Determination of ring stiffness
Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Specifications for manholes and inspection chambers in traffic areas and deep underground

Plastics piping systems for non-pressure underground drainage and sewerage — Unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Covers and frames
Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings — Styrene copolymer blends (SAN + PVC)

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 1: Material and performance specifications for pipes, fittings and the systems
Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement sans pression enterrés — Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) — Partie 1 : Spécifications des matières et critères de performance des tubes, raccords et système

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 2: Pipes with smooth external surface (all materials), type A
Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement sans pression enterrés — Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) — Partie 2 : Tubes et raccords avec une surface externe lisse, type A

Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) - Part 3: Pipes with a non-smooth external surface (all materials), type B
Systèmes de canalisations en plastique pour les branchements et les collecteurs d'assainissement sans pression enterrés — Systèmes de canalisations à parois structurées en poly(chlorure de vinyle) non plastifié (PVC-U), polypropylène (PP) et polyéthylène (PE) — Partie 3 : Tubes et raccords avec une surface externe non lisse, type B
4.2 – Systematic review enquiries

The procedure is handled by ISO/Central Secretariat. Each systematic review is automatically sent each 5 years after the publication of an ISO standard.

Enquiry finished:

ISO 8283-1:1991
Plastics pipes and fittings -- Dimensions of sockets and spigots for discharge systems inside buildings -- Part 1: Unplasticized poly(vinyl chloride) (PVC-U) and chlorinated poly (vinyl chloride) (PVC-C) (confirmed - see N 1318 – July 2015)

ISO 265-1:1988

ISO 13229:2010
Thermoplastics piping systems for non-pressure applications -- Unplasticized poly(vinyl chloride) (PVC-U) pipes and fittings -- Determination of the viscosity number and K-value (confirmed - see N 1320 – July 2015)

ISO 8773:2006
Plastics piping systems for non-pressure underground drainage and sewerage -- Polypropylene (PP) (confirmed - see N 1321 – July 2015)

Enquiry until 2015-09-16:

ISO 13268:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics shafts or risers for inspection chambers and manholes -- Determination of ring stiffness

ISO 13254:2010
Thermoplastics piping systems for non-pressure applications -- Test method for watertightness

ISO 13259:2010
Thermoplastics piping systems for underground non-pressure applications -- Test method for leaktightness of elastomeric sealing ring type joints

ISO 13263:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics fittings -- Test method for impact strength

ISO 13262:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics spirally-formed structured-wall pipes -- Determination of the tensile strength of a seam

ISO 13255:2010
Thermoplastics piping systems for soil and waste discharge inside buildings -- Test method for airtightness of joints

ISO 13257:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics inspection chamber and manhole bases -- Test methods for buckling resistance

ISO 13257:2010
Thermoplastics piping systems for non-pressure applications -- Test method for resistance to elevated temperature cycling

ISO 13266:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics shafts or risers for inspection chambers and manholes -- Determination of resistance against surface and traffic loading

ISO 8772:2006
Plastics piping systems for non-pressure underground drainage and sewerage -- Polyethylene (PE)

ISO 13264:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Thermoplastics fittings -- Test method for mechanical strength or flexibility of fabricated fittings

ISO 13260:2010
Thermoplastics piping systems for non-pressure underground drainage and sewerage -- Test method for resistance to combined temperature cycling and external loading
4.3 – Current work

None

4.3.1 - Draft standards submitted to the final draft International standard procedure (FDIS)

None

4.3.2 - Draft standards between DIS and FDIS

ISO/DTS 17902 (WG4) Wrapped electrofusion jointed systems for solid wall and structured wall piping systems for gravity drains and sewers

4.3.3 - Draft standards submitted to the draft international standard procedure (DIS)

None

4.3.4 - Draft standards between CD and DIS

ISO/CD 19469-1 (WG4) Plastics piping systems for non-pressure drainage - Single Wall Corrugated piping systems of polypropylene (PP), polyethylene (PE) and poly(vinyl chloride) (PVC) - Part 1: General requirements and performance characteristics

ISO/CD 19469-2 (WG4) Plastics piping systems for non-pressure drainage - Single Wall Corrugated piping systems of polypropylene (PP), polyethylene (PE) and poly(vinyl chloride) (PVC) - Part 2: Pipes and fittings with a single wall corrugation for shallow burial installations

ISO/CD 19469-3 (WG4) Plastics piping systems for non-pressure drainage - Single Wall Corrugated piping systems of polypropylene (PP), polyethylene (PE) and poly(vinyl chloride) (PVC) - Part 3: Pipes and fittings with a single wall corrugation for deep burial installations

4.3.5 - Draft standards submitted to Committee draft (CD)

None

4.3.6 – Draft standards in preparation in a Working Group

ISO/NP 21138-4 (WG4) Plastics piping systems for non-pressure underground drainage and sewerage – Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) – Part 4: Dual and triple wall corrugated pipes and fittings, Type C

4.3.7 – Preliminary WI

ISO 3633:2002 (WG1) Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings -- Unplasticized poly(vinyl chloride) (PVC-U) (Inscribed April 2013)