A1

```
#A1=ISO-8859-1:1998
#A2=fr
#A3=,
#A4=.
#A5="
#A6=2010
#B01=AAD,AAF,AAB,AAJ,AAK,AAL,ABA,ABC
"SD1445/1012","SD1445/1013", "SD1445/1012","Grande Rue",B,A,"EN13508-2:2003",A
#B02=ABE,ABF,ABK,ABJ,ABL,ABM, ABR, ABS, ACA,ACB,ACH,ACK,ADA,ADE
B,"1997-12-23",B, A, E, AE, B, " GRANDE.JPG", A, 450,A,2.5,A,A,55
#C=I,J,A,B,C,D,E,F,G,H,M,N
1.2,,BCA,A,A,150,,,09,,"GR01.WMF",00:02:15
10.2,,BAB,B,A,,,"localisé",12,,"GR02.WMF",00:05:30
51.2,,BCE,,,"SD1445/1013",,,,,,00:07:55
```

Figure B.3 — Example of character separated data transfer format - French language A1

A1

B.3 Extensible Mark-up Language Format

B.3.1 General

The transfer format is an XML (Extended Mark-up Language) file.

The root of the file should have the identifier DATA. This should be followed by the file header information with the identifier ZA. Following this the data for each inspection, a single pipe length or a single manhole or inspection chamber should be encoded with the identifier ZB, which should also contain the header information of the inspection. Within each inspection header information should have the identifier B and the observations for the inspection should have the identifier ZC.

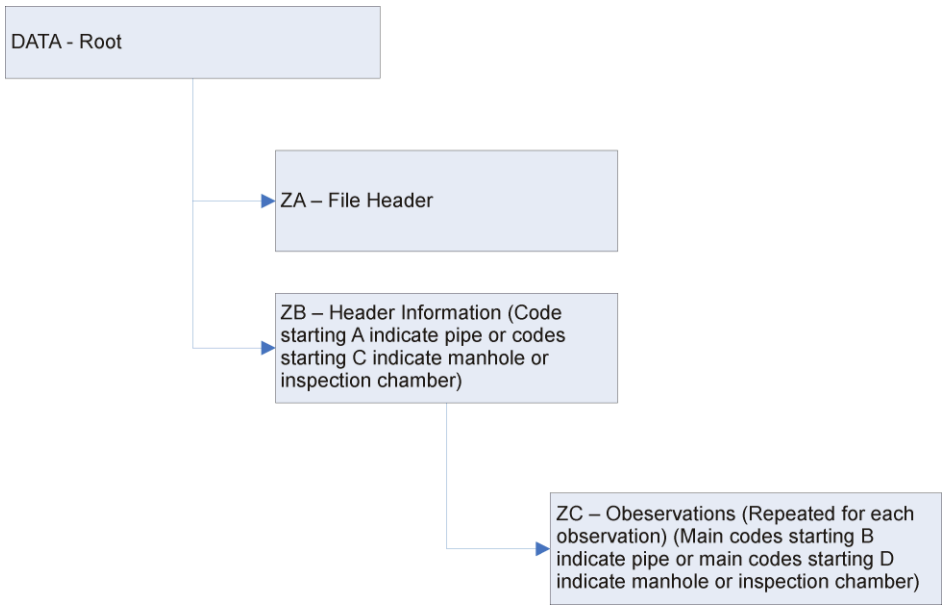

Figure B.4 — Structure of XML data transfer format

NOTE The data structure could be defined in a schema. The schema file would need to be single web-accessible location.

B.3.2 File header information

The first part of the data for a pipeline length inspection or a manhole or inspections chamber inspection should contain information about the format of the data. The element name for this section of the file should be ZA. The order of the element names should be alphabetical.

The XML header will have already included the character set used.

The first element in the file header is the language code, which should have the element name A2. This is used to indicate the language in which the remarks are written. The language code shall be as specified in ISO 639:1988. The codes for some of the languages commonly used in CEN member and affiliate countries are reproduced in Table A.2. For other languages reference shall be made to ISO 639-2:1998 and should contain the appropriate language code in accordance with ISO 639-2:1998.

The second element in the file header is the version of the data exchange format, which should have the name A6. The version described here is version 2010.

B.3.3 Inspection header information

The second part of the data contains the inspection header information. Drain or sewer header information should be coded in accordance with Annex C and manhole or inspection chamber information should be coded in accordance with Annex D. The element name for this section of the file should be ZB. The order of the element names should be alphabetical.

The element name for each item of data should be the language appropriate independent header codes as specified in Annex C or Annex D.

B.3.4 Inspection data

The third part of the data is the inspection data. The element name for this section of the file should be ZC. This should be coded in accordance with Clause 8 or Clause 11 as appropriate. Only the language independent codes should be used. The order of the element names should be alphabetical.

Each observation should be contained in a section with the element name ZC. Each data item in the observation should be included in the section using an element name which is the same as the field code defined in Table A.3.

B.3.5 Example

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes" ?>
<DATA>
  <ZA>
    <A2>de</A2>
    <A6>2010</A6>
  </ZA>
  <ZB>
    <AAB>SD1445/1012</AAB>
    <AAD>SD1445/1012</AAD>
    <AAF>SD1445/1013</AAF>
    <AAJ>Hauptstraße</AAJ>
    <AAK>B</AAK>
    <AAL>A</AAL>
    <ABA>EN13508-2:2003 A1</ABA>
    <ABC>A</ABC>
    <ABE>B</ABE>
    <ABF>1997-12-23</ABF>
    <ABJ>A</ABJ>
    <ABK>B</ABK>
    <ABL>E</ABL>
    <ABM>AE</ABM>
    <ABR>B</ABR>
    <ABS>HAUPT.MPEG</ABS>
```

```
      <ACA>A</ACA>
      <ACB>450</ACB>
      <ACH>2.5</ACH>
      <ACK>A</ACK>
      <ADA>A</ADA>
      <ADE>55</ADE>
      <ZC>
        <A>BCA</A>
        <B>A</B>
        <C>A</C>
        <D>150</D>
        <G>09</G>
        <I>1.2</I>
        <M>HA01.JPG</M>
        <N>00:02:15</N>
      </ZC>
      <ZC>
        <A>BAB</A>
        <B>B</B>
        <C>A</C>
        <F>beschränkt</F>
        <G>12</G>
        <I>10.2</I>
        <M>HA02.JPG</M>
        <N>00:05:30</N>
      </ZC>
      <ZC>
        <A>BCE</A>
        <D>SD1445/1013</D>
        <I>51.2</I>
        <N>00:07:55</N>
      </ZC>
    </ZB>
</DATA>
```

Figure B.5 — Example of XML data transfer format – German language

```
<?xml version="1.0" encoding= "ISO-8859-1" standalone = "yes" ?>
<DATA>
  <ZA>
    <A2>en</A2>
    <A6>2010</A6>
  </ZA>
  <ZB>
    <AAB>SD1445/1012</AAB>
    <AAD>SD1445/1012</AAD>
    <AAF>SD1445/1013</AAF>
    <AAJ>High Street</AAJ>
    <AAK>B</AAK>
    <AAL>A</AAL>
    <ABA>EN13508-2:2003 A1</ABA>
    <ABC>A</ABC>
    <ABE>B</ABE>
    <ABF>1997-12-23</ABF>
    <ABJ>A</ABJ>
    <ABK>B</ABK>
    <ABL>E</ABL>
    <ABM>AE</ABM>
    <ABR>B</ABR>
    <ABS>High.mpeg</ABS>
    <ACA>A</ACA>
    <ACB>450</ACB>
    <ACH>2.5</ACH>
```

```
    <ACK>A</ACK>
    <ADA>A</ADA>
    <ADE>55</ADE>
    <ZC>
      <A>BCA</A>
      <B>A</B>
      <C>A</C>
      <D>150</D>
      <G>09</G>
       <I>1.2</I>
      <M>HI01.WMF</M>
      <N>00:02:15</N>
    </ZC>
    <ZC>
      <A>BAB</A>
      <B>B</B>
      <C>A</C>
      <F>localised</F>
      <G>12</G>
      <I>10.2</I>
      <M>HI02.WMF</M>
      <N>00:05:30</N>
    </ZC>
    <ZC>
       <A>BCE</A>
       <D>SD1445/1013</D>
       <I>51.2</I>
       <N>00:07:55</N>
    </ZC>
  </ZB>
</DATA>
```

Figure B.6 — Example of XML data transfer format – English Language

```
<?xml version="1.0" encoding= "ISO-8859-1" standalone = "yes" ?>
<DATA>
  <ZA>
    <A2>fr</A2>
    <A6>2010</A6>
  </ZA>
    <ZB>
    <AAB>SD1445/1012</AAB>
    <AAD>SD1445/1012</AAD>
    <AAF>SD1445/1013</AAF>
    <AAJ>Grande Rue</AAJ>
    <AAK>B</AAK>
    <AAL>A</AAL>
    <ABA>EN13508-2:2003 A1</ABA>
    <ABC>A</ABC>
    <ABE>B</ABE>
    <ABF>1997-12-23</ABF>
    <ABJ>A</ABJ>
    <ABK>B</ABK>
    <ABL>E</ABL>
    <ABM>AE</ABM>
    <ABR>B</ABR>
    <ABS>Grande.mpg</ABS>
    <ACA>A</ACA>
    <ACB>450</ACB>
    <ACH>2.5</ACH>
    <ACK>A</ACK>
    <ADA>A</ADA>
```

```
      <ADE>55</ADE>
      <ZC>
        <A>BCA</A>
        <B>A</B>
        <C>A</C>
        <D>150</D>
        <G>09</G>
         <I>1.2</I>
        <M>GR01.WMF</M>
        <N>00:02:15</N>
      </ZC>
      <ZC>
        <A>BAB</A>
        <B>B</B>
        <C>A</C>
        <F>localise</F>
        <G>12</G>
        <I>10.2</I>
        <M>GR02.WMF</M>
        <N>00:05:30</N>
      </ZC>
      <ZC>
         <A>BCE</A>
         <D>SD1445/1013</D>
         <I>51.2</I>
         <N>00:07:55</N>
      </ZC>
    </ZB>
</DATA>
```

Figure B.7 — Example of XML data transfer format – French Language A1

Annex C
(informative)

Recommended system for coding of header information for drains and sewers

C.1 Introduction

These codes are used to describe information about the pipeline length as a whole.

C.2 Location of the inspection

[A1] For inspections between two nodes, the requirements of 7.1 (a) and (b) can be met either by:

a) recording a pipeline length reference (code AAA) and the start node coordinates (code AAB or AAC);

b) recording the two node references (codes AAD and AAF) or node coordinates (codes and AAE and AAG) and the start node reference or start node coordinate (code AAB or AAC).

For inspection starting or finishing at a connection to a main pipeline the requirements of 7.1 (a) and (b) can be met by:

c) recording the details of the main pipeline using either methods (a) or (b) above; and,

d) recording the longitudinal location of the connection of the lateral pipeline, along the main pipeline, and the circumferential location of that connection (codes AAH and AAI); and

e) recording either the node reference or the coordinates of the other node (codes AAT or AAU); and,

f) recording whether the inspection starts or finishes in the main pipeline (code AAV).

The requirements of 7.1 (c) can be met by recording the location (code AAJ). [A1]

Table C.1 — Codes for location of inspection

Code	Name	Description
AAA	Pipeline length reference (see 7.1 (a))	The pipeline length reference as specified by the employing authority.
AAB	Start node reference (see 7.1 (b))	The node reference of the start node as specified by the employing authority.
AAC	Start node coordinate (see 7.1 (b))	The grid reference (coordinates) of the start node.
AAD	Node 1 reference (see 7.1 (a))	The node reference of the first node as specified by the employing authority.
AAE	Node 1 node coordinate (see 7.1 (a))	The grid reference (coordinates) of the first node.
AAF	Node 2 reference (see 7.1 (a))	The node reference of the second node as specified by the employing authority.
AAG	Node 2 node coordinate (see 7.1 (a))	The grid reference (coordinates) of the second node.
AAH	Longitudinal location of start of lateral (see 7.1 (a))	⟨A1⟩ Where the inspection is of a lateral from a main pipeline, ⟨A1⟩ the longitudinal location, along the main pipeline, of the connection between the start of the lateral pipeline and the main pipeline in metres (see 8.1.7)

Table C.1 *(continued)*

Code	Name	Description
AAI	Circumferential location of start of lateral (see 7.1(a))	▌A1⟩ Where the inspection is of a lateral from a main pipeline, ⟨A1▐ the circumferential location, around the main pipeline, of the connection between the start of the lateral pipeline and the main pipeline (see 8.1.5)
AAJ	Location (see 7.1 (c))	A description of the location of the sewer (e.g. street name).
AAK	Direction of inspection	The direction of inspection as follows: — downstream (A) - the direction of inspection is in the same direction as the normal direction of the flow; — upstream (B) - the direction of the inspection is in the direction opposite to the normal direction of the flow. — not known (C) - the normal direction of flow is not known.
AAL	Location type	The type of location of the drain or sewer as follows: — in a road (A); — in a footway beside road (B); — in verge beside a road (C); — in other pedestrian area (D); — in field (E); — on property with buildings (F); — gardens (G); — under a permanent building (H); — woodland (I); — difficult access (e.g. motorway or operational railway land) (J); — under a waterway (K); — special type defined by the employing authority (the employing authority may define a number of codes prefixed by an X (e.g. XA)); — other (Z) – further details should be recorded using a general remark code (ADE) immediately following.
AAM	Employing authority	The name of the employing authority.
AAN	Town or village	The name of the town, village as specified by the employing authority.
AAO	District	The name of the district as specified by the employing authority.

Table C.1 *(continued)*

AAP	Name of sewer system	The name of the sewer system, or a sewer system reference as specified by the employing authority.
AAQ	Land ownership	The ownership of the land as: — public land (A); — private land (B); — not known (C).
⟨A1⟩ AAT	Node 3 reference (see 7.1 (a))	Where the inspection is of a lateral from a main pipeline, the node reference of the third node as specified by the employing authority. Where the node is private or there is no access this may take the form of an address of a property.
AAU	Node 2 node coordinate (see 7.1 (a))	Where the inspection is of a lateral from a main pipeline, the grid reference (coordinates) of the third node.
AAV	Lateral inspection start point	Where the inspection is of a lateral from a main pipeline, the start point of the inspection is: – the connection to the main sewer (A); or, – the third node (B). ⟨A1⟩

C.3 Inspection details

The requirements of 7.1 (d), (e), (f) and (g) can be met by recording the standard (Code ABA), the longitudinal reference point (code ABC), the method of inspection (code ABD) and the date of inspection (code ABE).

Table C.2 — Codes for inspection details

Code	Name	Description
ABA	Standard (see 7.1 (d))	The version of the standard used to record the data. This should be in the form ▌A1⟩ EN 13508-2:2003+A1:2011 ⟨A1▐.
ABB	Original coding system	Where the coding has been translated from an earlier version or from another system, the name of the original coding system.
ABC	Longitudinal reference point (see 7.1 (e))	The point of reference for the longitudinal location as follows (see 8.1.7): — the inside face of the wall of the starting node, (manhole, inspection chamber or outfall etc.) at the point where the drain or sewer passes through the wall (A); — the soffit of the end of the pipeline length inside the starting node (B).; — the centre of the starting manhole or inspection chamber (C); — the midpoint of the incoming and outgoing pipes, measured along the channel (D); — other (Z) – further details should be recorded using a general remark code (ADE) immediately following.
ABD		Not used
ABE	Method of inspection (see 7.1 (f))	The method of access as follows: — direct inspection of drain or sewer by an inspector walking through the pipeline (A); — inspection by means of a remotely controlled television camera passed through the pipeline (B); — inspection from the manhole or inspection chamber only (C).
ABF	Date of inspection (see 7.1 (g))	The calendar date of the inspection as specified in ISO 8601 using the CCYY-MM-DD format. (e.g. 1999-04-01 means 1st April 1999). Leading zeros should be included where necessary.
ABG	Time of inspection	▌A1⟩ The local time of the start of the inspection in the form specified in ISO 8601 using the hh:mm format. ⟨A1▐ Leading zeros shall be included where necessary.
ABH	Name of inspector	The name of the inspector and the name of the inspector's company.