```
<?xml version="1.0" encoding="UTF-8" ?>
- <SCL xmlns="http://www.iec.ch/61850/2006/SCL"</pre>
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.iec.ch/61850/2006/SCL SCL.xsd">
 - <Header id="1">
     <Text>DataTypeTemplate de la parte hidráulica del regulador de
       velocidad</Text>
   - <History>
       <Hitem when="22/10/2010" revision="1" version="1.0">Empezé a
         construir este ICD a partir del ICD del regulador de
         velocidad.</Hitem>
     </History>
   </Header>
 - <Communication>
   - <SubNetwork name="SN1">
     - <ConnectedAP iedName="IED_MAIN_TNK" apName="AP1">
       - <Address>
          <P type="IP">192.168.10.1</P>
          <P type="IP-SUBNET">0.0.0.0</P>
          <P type="IP-GATEWAY">0.0.0.0</P>
         </Address>
       </ConnectedAP>
     </SubNetwork>
   </Communication>
 - <IED name="IEDsensRot" configVersion="1" desc="IED sensor de rotación"</p>
     manufacturer="David">
   - <Services>
       <DynAssociation />
       <GetDataObjectDefinition />
       <DataObjectDirectory />
       <GetDataSetValue />
       <SetDataSetValue />
       <DataSetDirectory />
       <ConfDataSet max="50" maxAttributes="250" />
       <GetDirectory />
       <ReadWrite />
       <ConfReportControl max="7" />
       <GetCBValues />
       <ReportSettings intqPd="Dyn" trqOps="Dyn" bufTime="Dyn" optFields="Dyn"</pre>
         rptID="Dyn" datSet="Fix" cbName="Fix" />
       <GSESettings appID="Fix" cbName="Fix" dataLabel="Dyn" datSet="Fix" />
       <GOOSE max="5" />
       <FileHandling />
       <ConfLNs fixLnInst="true" fixPrefix="true" />
     </Services>
   - <AccessPoint name="AP1">
     - <Server>
        <Authentication />
       - <LDevice inst="1" IdName="LD1" desc="L\'imites de los valores</p>
          t\'ipicos de ajuste">
          <LN0 InType="LLN0_1" inst="" InClass="LLN0" />
          <LN inst="1" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
            desc="L\'imite de la velocidad" />
```

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<LN inst="1" InType="FSPT 1" InClass="FSPT" prefix="Spd "</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="2" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="2" InType="FSPT_1" InClass="FSPT" prefix="Spd "</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="3" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="3" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="4" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="4" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="5" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="5" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="6" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"
           desc="L\'imite de la velocidad" />
         <LN inst="6" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="7" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="7" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="8" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="8" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="9" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="9" InType="FSPT_1" InClass="FSPT" prefix="Spd_"</pre>
           desc="Punto configurable de la velocidad" />
         <LN inst="10" InType="FLIM_tipical" InClass="FLIM" prefix="Spd_"</pre>
           desc="L\'imite de la velocidad" />
         <LN inst="10" InType="FSPT 1" InClass="FSPT" prefix="Spd "</pre>
           desc="Punto configurable de la velocidad" />
       </LDevice>
     - <LDevice inst="2" IdName="LD2" desc="L\'imites de valores de</p>
         ajuste">
         <LN0 InType="LLN0_1" inst="" InClass="LLN0" />
         <LN InType="HSPD 1" inst="1" InClass="HSPD" prefix="Spd "</pre>
           desc="Speed monitoring" />
         <LN InType="TRTN_1" inst="1" InClass="TRTN" prefix="Spd_"</pre>
           desc="Tacometer" />
       </LDevice>
     </Server>
   </AccessPoint>
  </IED>
- <DataTypeTemplates>
 - <LNodeType id="LLN0_1" InClass="LLN0">
     <!-- Common logical node information -->
```

```
<DO name="Mod" type="Mod_1" />
   <DO name="Beh" type="Beh 1" />
   <DO name="Health" type="Health_1" />
   <DO name="NamPlt" type="NamPlt_1" />
 </LNodeType>
- <LNodeType id="FLIM_tipical" InClass="FLIM" desc="Limits of typical values">
   <!-- Common logical node information -->
   <DO name="Mod" type="Mod_1" />
   <DO name="Beh" type="Beh_1" />
   <DO name="Health" type="Health_1" />
   <DO name="NamPlt" type="NamPlt_1" />
   <!-- Status information -->
   <DO type="HiLim_typical" name="HiLim" desc="High limit reached (input
     signal above limit)" />
   <DO type="LoLim_typical" name="LoLim" desc="Low limit reached (input)</pre>
     signal below limit)" />
   <!-- Measured values -->
   <DO type="Out_typical" name="Out" desc="Output signal" />
   <!-- Settings -->
   <DO type="HiLimSpt_typical" name="HiLimSpt" desc="High limit set
   <DO type="LoLimSpt_typical" name="LoLimSpt" desc="Minimum limit set
     point" />
  </LNodeType>
- <LNodeType id="FSPT_1" InClass="FSPT" desc="Set point control function">
   <!-- Common logical node information -->
   <DO name="Mod" type="Mod_1" />
   <DO name="Beh" type="Beh 1" />
   <DO name="Health" type="Health_1" />
   <DO name="NamPlt" type="NamPlt 1" />
   <!-- Measured value -->
   <DO type="SptMem_1" name="SptMem" />
  </LNodeType>
- <LNodeType id="TRTN_1" InClass="TRTN" desc="Tacometer">
   <!-- Common logical node information -->
   <DO name="Mod" type="Mod_1" />
   <DO name="Beh" type="Beh_1" />
   <DO name="Health" type="Health_1" />
   <DO name="NamPlt" type="NamPlt_1" />
   <DO type="SmpRteRng_1" name="SmpRteRng" />
   <!-- Measured values -->
   <DO type="Spd_1" name="Hz" />
   <!-- Settings -->
   <DO type="SmpRte_1" name="SmpRte" />
 </LNodeType>
- <LNodeType id="HSPD_1" InClass="HSPD">
   <!-- Common logical node information -->
   <DO name="Mod" type="Mod_1" />
   <DO name="Beh" type="Beh_1" />
   <DO name="Health" type="Health_1" />
   <DO name="NamPlt" type="NamPlt_1" />
   <DO type="SmpRteRng_1" name="SmpRteRng" />
```

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<!-- TODO: falta completar bien -->
   </LNodeType>
         Data Objects - IEC 61850-7-3 -->
   <DOType cdc="ASG" id="HiLimSpt_typical" />
   <DOType cdc="ASG" id="LoLimSpt_typical" />
   <DOType cdc="ASG" id="Kp_pid" desc="Proportional gain" />
   <DOType cdc="ASG" id="Kl_pid" desc="Integral gain" />
   <DOType cdc="ING" id="PidAlg_pid" desc="PID" />
   <DOType cdc="ING" id="SmpRte_1" desc="Sampling rate setting" />
   <DOType cdc="ING" id="SmpRteRng_1" desc="Available sampling rate
     range" />
   <DOType cdc="INC" id="Mod_1" desc="Mode" />
   <DOType cdc="INS" id="Beh_1" desc="Behaviour" />
   <DOType cdc="INS" id="Health_1" desc="Health" />
   <DOType cdc="LPL" id="NamPlt_1" desc="Name plate" />
   <DOType cdc="MV" id="Out typical" />
   <DOType cdc="MV" id="SptMem_1" desc="Set point in memory" />
   <DOType cdc="MV" id="Out_pid" desc="PID output" />
   <DOType cdc="MV" id="PAct_pid" desc="Proportional action" />
   <DOType cdc="MV" id="IAct_pid" desc="Integral action" />
   <DOType cdc="MV" id="DAct_pid" desc="Derivative action" />
   <DOType cdc="MV" id="P_pid" desc="P output" />
   <DOType cdc="MV" id="I_pid" desc="I output" />
   <DOType cdc="MV" id="D_pid" desc="D output" />
   <DOType cdc="SPS" id="HiLim_typical" />
   <DOType cdc="SPS" id="LoLim_typical" />
   <DOType cdc="SAV" id="Spd_1" desc="Rotational speed (Hz)" />
 </DataTypeTemplates>
</SCL>
```