```
<?xml version="1.0" encoding="UTF-8"?>
<SCL xmlns="http://www.iec.ch/61850/2006/SCL" 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>
                          <Hitem when="01/11/2011" revision="3" version="1.0">
                                   Este es el SCL candidato para la versión final.
                  </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" manufacturer="David">
                           <GetDataObjectDefinition/>
                          <DataObjectDirectory/>
                          <ConfDataSet max="5" maxAttributes="50"/>
                          <GetDirectory/>
                          <ConfReportControl max="5"/>
                          <GetCBValues/>
                          <ReportSettings intgPd="Dyn" trgOps="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="false"/>
                          <SMVSettings smpRate="Conf">
                                   <SmpRate>256</SmpRate>
                                   <SmpRate>80</SmpRate>
                          </SMVSettings>
                  </Services>
                  <AccessPoint name="AP1">
                          <Server>
                                   <Authentication/>
                                   <LDevice inst="1" ldName="LD1" desc="L\'imites de los valores t\'ipicos de
ajuste">
                                            <LN0 lnType="LLN0 1" inst="" lnClass="LLN0"/>
                                            <LN inst="1" lnType="FLIM tipical" lnClass="FLIM"
prefix="Spd " desc="L\'imite de la velocidad"/>
                                            <LN inst="1" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "</pre>
desc="Punto configurable de la velocidad"/>
                                            <LN inst="2" lnType="FLIM tipical" lnClass="FLIM"
prefix="Spd_" desc="L\'imite de la velocidad"/>
                                            <LN inst="2" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "</pre>
desc="Punto configurable de la velocidad"/>
                                            <LN inst="3" lnType="FLIM tipical" lnClass="FLIM"</pre>
prefix="Spd " desc="L\'imite de la velocidad"/>
                                            <LN inst="3" lnType="FSPT_1" lnClass="FSPT" prefix="Spd_"
desc="Punto configurable de la velocidad"/>
```

```
<LN inst="4" lnType="FLIM_tipical" lnClass="FLIM"</pre>
prefix="Spd " desc="L\'imite de la velocidad"/>
                                             <LN inst="4" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "
desc="Punto configurable de la velocidad"/>
                                             <LN inst="5" lnType="FLIM_tipical" lnClass="FLIM"</pre>
prefix="Spd " desc="L\'imite de la velocidad"/>
                                             <LN inst="5" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "
desc="Punto configurable de la velocidad"/>
                                             <LN inst="6" lnType="FLIM tipical" lnClass="FLIM"
prefix="Spd " desc="L\'imite de la velocidad"/>
                                             <LN inst="6" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "
desc="Punto configurable de la velocidad"/>
                                             <LN inst="7" lnType="FLIM tipical" lnClass="FLIM"
prefix="Spd_" desc="L\'imite de la velocidad"/>
                                             <LN inst="7" lnType="FSPT_1" lnClass="FSPT" prefix="Spd_"</pre>
desc="Punto configurable de la velocidad"/>
                                             <LN inst="8" lnType="FLIM tipical" lnClass="FLIM"
prefix="Spd_" desc="L\'imite de la velocidad"/>
                                             <LN inst="8" lnType="FSPT_1" lnClass="FSPT" prefix="Spd_"</pre>
desc="Punto configurable de la velocidad"/>
                                             <LN inst="9" lnType="FLIM_tipical" lnClass="FLIM"
prefix="Spd_" desc="L\'imite de la velocidad"/>
                                             <LN inst="9" lnType="FSPT_1" lnClass="FSPT" prefix="Spd_"</pre>
desc="Punto configurable de la velocidad"/>
                                             <LN inst="10" lnType="FLIM_tipical" lnClass="FLIM"</pre>
prefix="Spd " desc="L\'imite de la velocidad"/>
                                             <LN inst="10" lnType="FSPT 1" lnClass="FSPT" prefix="Spd "
desc="Punto configurable de la velocidad"/>
                                    </LDevice>
                                    <LDevice inst="2" ldName="LD2" desc="L\'imites de valores de ajuste">
                                             <LN0 lnType="LLN0 1" inst="" lnClass="LLN0"/>
                                             <LN lnType="HSPD 1" inst="1" lnClass="HSPD" prefix="Spd "</pre>
desc="Speed monitoring" />
                                             <LN lnType="TRTN_1" inst="1" lnClass="TRTN" prefix="Spd_"</pre>
desc="Tacometer" />
                                    </LDevice>
                           </Server>
                  </AccessPoint>
         </IED>
         <DataTypeTemplates>
                  <LNodeType id="LLN0 1" lnClass="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" lnClass="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</pre>
above limit)"/>
                           <DO type="LoLim_typical" name="LoLim" desc="Low limit reached (input signal</pre>
below limit)"/>
                           <!--Measured values-->
                           <DO type="Out typical" name="Out" desc="Output signal"/>
                           <!--Settings-->
                           <DO type="HiLimSpt_typical" name="HiLimSpt" desc="High limit set point"/>
                           <DO type="LoLimSpt typical" name="LoLimSpt" desc="Minimum limit set point"/>
```

```
</LNodeType>
<LNodeType id="FSPT 1" lnClass="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" lnClass="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="StndStl" name="StndStl"/>
</LNodeType>
<LNodeType id="HSPD_1" lnClass="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"/>
        <!-- Status information -->
        <DO type="status HSPD" name="StndStl"/>
        <DO type="status HSPD" name="SpdCrp"/>
        <DO type="status_HSPD" name="SpdBrk"/>
        <DO type="status_HSPD" name="SpdLub"/>
        <DO type="status_HSPD" name="SpdLft"/>
        <DO type="status_HSPD" name="SpdRB"/>
        <DO type="status_HSPD" name="SpdExt"/>
        <DO type="status_HSPD" name="SpdSyn"/>
        <DO type="status HSPD" name="SpdOvr"/>
        <DO type="status HSPD" name="DirRot"/>
        <DO type="settings HSPD" name="SetSpdCrp"/>
        <DO type="settings_HSPD" name="SetSpdBrk"/>
        <DO type="settings_HSPD" name="SetSpdLub"/>
        <DO type="settings_HSPD" name="SetSpdLft"/>
        <DO type="settings HSPD" name="SetSpdRb"/>
        <DO type="settings HSPD" name="SetSpdExt"/>
        <DO type="settings HSPD" name="SetSpdSyn"/>
        <DO type="settings HSPD" name="SetSpdOv"/>
        <DO type="meas spd" name="Spd"/>
</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="ASG" id="settings HSPD" desc="HSPD settings"/>
<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="DAct_pid" desc="Derivative action"/>
           <DOType cdc="MV" id="I_pid" desc="I output"/>
           <DOType cdc="MV" id="D_pid" desc="D output"/>
           <DOType cdc="MV" id="meas_spd" desc="Rotational speed of the shaft (r/s)"/>
           <DOType cdc="SPS" id="HiLim typical"/>
           <DOType cdc="SPS" id="LoLim typical"/>
           <DOType cdc="SPS" id="status HSPD" desc="HSPD status information"/>
           </DataTypeTemplates>
</SCL>
```