```
<?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="21/10/2010" revision="1" version="1.0">
                                   Este ICD fue iniciado a partir de la version 1.2 revisión 3 del ICD del tanque
principal.
                          <Hitem when="21/10/2010" revision="2" version="1.0">
                                   TODO: Falta corregir los números de instancias de cada nodo lógico.
                                   TODO: Falta eliminar los DataTypeTemplates que no se usan aqui.
                          <Hitem when="01/11/2011" revision="3" version="1.0">
                                   Este es el SCL candidato para la versión final.
                          </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="IEDcmprsAirPlant" configVersion="1" desc="IED de la planta de aire comprimido"
manufacturer="David">
                  <Services>
                          <DynAssociation/>
                          <GetDataObjectDefinition/>
                          <DataObjectDirectory/>
                          <GetDataSetValue/>
                          <SetDataSetValue/>
                          <DataSetDirectory/>
                          <ConfDataSet max="50" maxAttributes="250"/>
                          <GetDirectory/>
                          <ReadWrite/>
                          <ConfReportControl max="7"/>
                          <GetCBValues/>
                          <ReportSettings intgPd="Dyn" trgOps="Dyn" bufTime="Dyn" optFields="Dyn"
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="LD1tank" desc="Air oil pressure-tanks">
                                            <LN0 lnType="LLN0 1" inst="" lnClass="LLN0"/>
                                            <LN lnType="ZMOTa" inst="4" lnClass="ZMOT" prefix="Pa_"</pre>
desc="(AF) Motor for the compressor unit AF"/>
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<LN lnType="KVLV_relief" inst="24" lnClass="KVLV"</pre>
prefix="Pa " desc="(24) Relief valve"/>
                                           <LN lnType="TPRS gauge" inst="10" lnClass="TPRS"</pre>
prefix="Pa " desc="(25) Pressure-gauge"/>
                                           <LN lnType="TPOS prs sw" inst="29" lnClass="TPOS"</pre>
prefix="Pa " desc="(DE) Pressure switch"/>
                                           <LN lnType="TPOS prs sw" inst="30" lnClass="TPOS"</pre>
prefix="Pa " desc="(DF) Pressure switch"/>
                                           <LN lnType="TPOS prs sw" inst="31" lnClass="TPOS"
prefix="Pa " desc="(DG) Pressure switch"/>
                                           <LN lnType="TPOS prs sw" inst="32" lnClass="TPOS"</pre>
prefix="Pa " desc="(LM) Pressure switch"/>
                                           <LN lnType="TPOS e" inst="33" lnClass="TPOS" prefix="Gv "</pre>
desc="(EC) Wicket-gate displacement sensor"/>
                                            <LN lnType="FLIM_" inst="2" lnClass="FLIM" prefix="Gv_"
desc="(LA) Limit to reach the overspeed (speed limit)"/>
                                           <LN lnType="FSPT for flim" inst="1" lnClass="FSPT"</pre>
prefix="Gv_" desc="(LA) Speed limit set-point"/>
                                   </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 id="FLIM" lnClass="FLIM" desc="Wicket gate closure travel limit">
                          <!--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 name="HiLim" type="xLim_1" desc="High Limit reached"/>
                          <DO name="LoLim" type="xLim 1" desc="Low Limit reached"/>
                          <!-- Measured values -->
                          <DO name="Out" type="Out 1" desc="Output signal"/>
                          <DO name="HiLimSpt" type="xLimSpt 1" desc="High Limit setpoint"/>
                          <DO name="LoLimSpt" type="xLimSpt_1" desc="Low Limit setpoint"/>
                          <DO name="Blk" type="Blk 1" desc="Block operation"/>
                 </LNodeType>
                 <LNodeType id="FSPT for flim" lnClass="FSPT" desc="Wicket gate closure travel limit set-</pre>
point">
                          <!-- 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 values-->
                          <DO type="SptMem 1" name="SptMem" desc="Setpoint in memory"/>
                 </LNodeType>
                 <LNodeType id="KVLV relief" lnClass="KVLV" desc="Relief pressure valve">
                          <!-- 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 name="ClsPos" type="ClsPos 1"/>
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<DO name="Mov" type="Mov_1"/>
                         <!-- Controls -->
                         <DO name="Opn" type="Opn 1"/>
                         <DO name="Cls" type="Cls 1"/>
                         <DO name="BlkOpn" type="BlkOpn 1"/>
                         <DO name="BlkCls" type="BlkCls 1"/>
                </LNodeType>
                <LNodeType id="TPOS e" lnClass="TPOS" desc="valve displacement sensor">
                         <!-- 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 values -->
                         <DO name="PosPc" type="PosPc 1"/>
                         <!-- Settings -->
                         <DO name="SmpRte" type="SmpRte_1"/>
                </LNodeType>
                <LNodeType id="TPOS_prs_sw" lnClass="TPOS" desc="Pressure switch">
                         <!-- 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 name="SmpRteRng" type="SmpRteRng 1"/>
                         <!-- Measured values -->
                         <DO name="PosPc" type="PosPc 1"/>
                         <!-- Settings -->
                         <DO name="SmpRte" type="SmpRte 1"/>
                </LNodeType>
                 <LNodeType id="TPRS gauge" lnClass="TPRS" desc="Pressure-gauge">
                         <!-- 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 name="SmpRteRng" type="SmpRteRng_4"/>
                         <!-- Measured values -->
                         <DO name="Pres" type="Pres_3"/>
                         <!-- Settings -->
                         <DO name="SmpRte" type="SmpRte_4"/>
                </LNodeType>
                 <LNodeType id="ZMOTa" lnClass="ZMOT" desc="Motor for the pump unit">
                         <!-- 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 name="OpTmh" type="OpTmh 1"/>
                         <!-- Controls -->
                         <DO name="DExt" type="DExt 1"/>
                </LNodeType>
                <!-- Data Objects - IEC 61850-7-3 -->
                <DOType cdc="ASG" id="VlmCap_1" desc="Total Volume capacity"/>
                <DOType cdc="ASG" id="xLimSpt_1" desc="Hight limit set point"/>
                <DOType cdc="ASG" id="TmpAlmSpt_1" desc="Temperature alarm level reached"/>
                <DOType cdc="ASG" id="TmpTrSpt_1" desc="Temperature trip level reached"/>
                <DOType cdc="DPC" id="Operate 1" desc="Operate pump"/>
                <DOType cdc="DPC" id="ClsPos 1" desc="Closed end position reached (valve can not move
further)"/>
                <DOType cdc="DPC" id="OpnPos_1" desc="Open end position reached (valve can not move
further)"/>
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<DO name="OpnPos" type="OpnPos_1"/>

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<DOType cdc="DPC" id="Opn_1" desc="Valve to full open position"/>
                 <DOType cdc="DPC" id="Cls_1" desc="Valve to full closed position"/>
                 <DOType cdc="ING" id="SmpRteSet 1" desc="Sampling rate setting"/>
                 <DOType cdc="ING" id="SmpRte 1" desc="Sampling rate setting"/>
                 <DOType cdc="ING" id="SmpRte 2" desc="Sampling rate setting"/>
                 <DOType cdc="ING" id="SmpRte 3" desc="Sampling rate setting"/>
                 <DOType cdc="ING" id="SmpRte 4" desc="Sampling rate setting"/>
                 <DOType cdc="ING" id="SmpRteRng 1" desc="Available sampling rate range"/>
                 <DOType cdc="ING" id="SmpRteRng 2" desc="Available sampling rate range"/>
                 <DOType cdc="ING" id="SmpRteRng 3" desc="Available sampling rate range"/>
                 <DOType cdc="ING" id="SmpRteRng 4" 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="INS" id="TnkTyp_1" desc="Type of tank (pressure only, level only, both
pressure and level)"/>
                 <DOType cdc="INS" id="OpCnt 1" desc="Operation counter"/>
                 <DOType cdc="INS" id="OpTmh_1" desc="Operation time"/>
                 <DOType cdc="LPL" id="NamPlt_1" desc="Name plate"/>
                 <DOType cdc="MV" id="Pres_1" desc="Pressure in the tank"/>
                 <DOType cdc="MV" id="LevPc_1" desc="Level in the tank (as percentage of full
tank level)"/>
                 <DOType cdc="MV" id="Out_1" desc="Output signal"/>
                 <DOType cdc="MV" id="SptMem_1" desc="Set point in memory"/>
                 <DOType cdc="MV" id="Tmp_1" desc="Temperature of the media in the tank"/>
                 <DOType cdc="MV" id="Tmp_2" desc="Temperature (C)"/>
                 <DOType cdc="SAV" id="LevPc_2" desc="Level (percentage)"/>
                 <DOType cdc="SAV" id="PosPc_1" desc="Position given as percentage of full movement"/>
                 <DOType cdc="SAV" id="Pres 2" desc="Pressure of media [Pa]"/>
                 <DOType cdc="SAV" id="Pres 3" desc="Pressure of media [Pa]"/>
                 <DOType cdc="SPC" id="Blk 1" desc="Block operation"/>
                 <DOType cdc="SPC" id="BlkOpn_1" desc="Block opening of the valve"/>
                 <DOType cdc="SPC" id="BlkCls_1" desc="Block closing of the valve"/>
                 <DOType cdc="SPC" id="DExt_1" desc="De-excitation"/>
                 <DOType cdc="SPS" id="BlkSt 2" desc="The pump is blocked from operation"/>
                 <DOType cdc="SPS" id="xLim_1" desc="Limit reached"/>
                 <DOType cdc="SPS" id="Op_1" desc="Level of action reached"/>
                 <DOType cdc="SPS" id="ACAlm 1" desc="AC supply failure (fuse or other problem)"/>
                 <DOType cdc="SPS" id="ACAlm 2" desc="AC supply failure (fuse or other problem)"/>
                 <DOType cdc="SPS" id="Alm 1" desc="Temperature alarm level reached"/>
                 <DOType cdc="SPS" id="Trip_1" desc="Temperature trip level reached"/>
                 <DOType cdc="SPS" id="MotPro 1" desc="Motor protection tripped"/>
                 <DOType cdc="SPS" id="MotPro 2" desc="Motor protection tripped"/>
                 <DOType cdc="SPS" id="FilAlm 1" desc="Filter alarm"/>
                 <DOType cdc="SPS" id="Loc 1" desc="Local operation selected"/>
                 <DOType cdc="SPS" id="Mov 1" desc="Valve is moving"/>
                 <DOType cdc="SPS" id="Stuck 1" desc="Valve is blocked (can not move from present
position)"/>
        </DataTypeTemplates>
```