```
<?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="IEDairOilTNK" configVersion="1" desc="IED de los tanques de aire y aceite"
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="KTNK_air_oil" inst="2" lnClass="KTNK"</pre>
prefix="Pa_" desc="(15) Air-oil pressure-tank"/>
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<LN lnType="KVLV_aut_contr" inst="15" lnClass="KVLV"</pre>
prefix="Pa" desc="(17) Automatic controlled isolating valve"/>
                                              <LN lnType="TLEV_gauge" inst="2" lnClass="TLEV"</pre>
prefix="Lvl " desc="(18) Float level gauge"/>
                                              <LN lnType="TLEV gauge" inst="3" lnClass="TLEV"</pre>
prefix="Lvl " desc="(18) Float level gauge"/>
                                              <LN lnType="TPOS prs sw" inst="11" lnClass="TPOS"</pre>
prefix="Pa " desc="(DB) Pressure-switch DB"/>
                                              <LN lnType="TPOS prs sw" inst="12" lnClass="TPOS"</pre>
prefix="Pa " desc="(DC) Pressure-switch DC"/>
                                              <LN lnType="TPOS prs sw" inst="13" lnClass="TPOS"</pre>
prefix="Pa" desc="(DD) Pressure-switch DD"/>
                                              <LN lnType="TPOS prs sw" inst="14" lnClass="TPOS"</pre>
prefix="Pa " desc="(LE) Pressure-switch LE"/>
                                              <LN lnType="TPOS_prs_sw" inst="15" lnClass="TPOS"</pre>
prefix="Pa" desc="(LF1) Pressure-switch LF1"/>
                                              <LN lnType="TPOS prs sw" inst="16" lnClass="TPOS"</pre>
prefix="Pa_" desc="(LF2) Pressure-switch LF2"/>
                                              <LN lnType="TPRS_trans" inst="4" lnClass="TPRS"</pre>
prefix="Pa_" desc="(EE) Pressure transmitter"/>
                                              <LN lnType="KVLV relief" inst="16" lnClass="KVLV"</pre>
prefix="Pa " desc="(20) Relief valve"/>
                                              <LN lnType="KVLV_solenoid_operated" inst="17"</pre>
lnClass="KVLV" prefix="Pa_" desc="(BE) Solenoid valve for automatic compressed air make-up"/>
                                              <LN lnType="TPRS_gauge" inst="5" lnClass="TPRS"</pre>
prefix="Pa " desc="(21) Pressure-gauge"/>
                                    </LDevice>
                                    <LDevice inst="2" ldName="LD2tank" desc="Air pressure tanks">
                                              <LN0 lnType="LLN0_1" inst="" lnClass="LLN0"/>
                                              <LN lnType="KTNK air oil" inst="3" lnClass="KTNK"</pre>
prefix="Pa " desc="(15) Air-oil pressure-tank"/>
                                              <LN lnType="KVLV aut contr" inst="18" lnClass="KVLV"</p>
prefix="Pa_" desc="(17) Automatic controlled isolating valve"/>
                                              <LN lnType="TLEV_gauge" inst="4" lnClass="TLEV"</pre>
prefix="Lvl " desc="(18) Float level gauge"/>
                                              <LN lnType="TLEV gauge" inst="5" lnClass="TLEV"</pre>
prefix="Lvl_" desc="(18) Float level gauge"/>
                                              <LN lnType="TPOS_prs_sw" inst="17" lnClass="TPOS"</pre>
prefix="Pa " desc="(DB) Pressure-switch DB"/>
                                              <LN lnType="TPOS_prs_sw" inst="18" lnClass="TPOS"</pre>
prefix="Pa " desc="(DC) Pressure-switch DC"/>
                                              <LN lnType="TPOS prs sw" inst="19" lnClass="TPOS"</pre>
prefix="Pa " desc="(DD) Pressure-switch DD"/>
                                              <LN lnType="TPOS prs sw" inst="20" lnClass="TPOS"</pre>
prefix="Pa " desc="(LE) Pressure-switch LE"/>
                                              <LN lnType="TPOS prs sw" inst="21" lnClass="TPOS"</pre>
prefix="Pa" desc="(LF1) Pressure-switch LF1"/>
                                              <LN lnType="TPOS prs sw" inst="22" lnClass="TPOS"</pre>
prefix="Pa" desc="(LF2) Pressure-switch LF2"/>
                                              <LN lnType="TPRS trans" inst="6" lnClass="TPRS"</pre>
prefix="Pa" desc="(EE) Pressure transmitter"/>
                                              <LN lnType="KVLV relief" inst="19" lnClass="KVLV"
prefix="Pa " desc="(20) Relief valve"/>
                                             <LN lnType="KVLV solenoid operated" inst="20"
lnClass="KVLV" prefix="Pa " desc="(BE) Solenoid valve for automatic compressed air make-up"/>
                                             <LN lnType="TPRS_gauge" inst="7" lnClass="TPRS"</pre>
prefix="Pa " desc="(21) Pressure-gauge"/>
                                     </LDevice>
                                    <LDevice inst="3" ldName="LD3tank" desc="Air oil pressure-tanks">
                                             <LN0 lnType="LLN0 1" inst="" lnClass="LLN0"/>
                                              <LN lnType="KTNK_air_oil" inst="4" lnClass="KTNK"</pre>
prefix="Pa" desc="(15) Air-oil pressure-tank"/>
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<LN lnType="KVLV_aut_contr" inst="21" lnClass="KVLV"</pre>
prefix="Pa" desc="(17) Automatic controlled isolating valve"/>
                                            <LN lnType="TLEV gauge" inst="6" lnClass="TLEV"</pre>
prefix="Lvl " desc="(18) Float level gauge"/>
                                            <LN lnType="TLEV_gauge" inst="7" lnClass="TLEV"</pre>
prefix="Lvl " desc="(18) Float level gauge"/>
                                            <LN lnType="TPOS prs sw" inst="23" lnClass="TPOS"</pre>
prefix="Pa " desc="(DB) Pressure-switch DB"/>
                                            <LN lnType="TPOS prs sw" inst="24" lnClass="TPOS"</pre>
prefix="Pa " desc="(DC) Pressure-switch DC"/>
                                            <LN lnType="TPOS prs sw" inst="25" lnClass="TPOS"</pre>
prefix="Pa" desc="(DD) Pressure-switch DD"/>
                                            <LN lnType="TPOS prs sw" inst="26" lnClass="TPOS"</pre>
prefix="Pa_" desc="(LE) Pressure-switch LE"/>
                                            <LN lnType="TPOS_prs_sw" inst="27" lnClass="TPOS"</pre>
prefix="Pa" desc="(LF1) Pressure-switch LF1"/>
                                            <LN lnType="TPOS prs sw" inst="28" lnClass="TPOS"</pre>
prefix="Pa_" desc="(LF2) Pressure-switch LF2"/>
                                            <LN lnType="TPRS_trans" inst="8" lnClass="TPRS"</pre>
prefix="Pa_" desc="(EE) Pressure transmitter"/>
                                            <LN lnType="KVLV_relief" inst="22" lnClass="KVLV"</pre>
prefix="Pa " desc="(20) Relief valve"/>
                                            <LN lnType="KVLV_solenoid_operated" inst="23"</pre>
lnClass="KVLV" prefix="Pa_" desc="(BE) Solenoid valve for automatic compressed air make-up"/>
                                            <LN lnType="TPRS_gauge" inst="9" lnClass="TPRS"</pre>
prefix="Pa " desc="(21) Pressure-gauge"/>
                                   </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="KTNK air oil" lnClass="KTNK" desc="Air-oil pressure tank">
                          <!-- 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="TnkTyp" type="TnkTyp 1"/>
                          <!-- Settings -->
                          <DO name="VlmCap" type="VlmCap_1"/>
                          <!-- Measured values -->
                          <DO name="Pres" type="Pres 1"/>
                          <DO name="LevPc" type="LevPc 1"/>
                          <DO name="Vlm" type="Vlm 1"/>
                          <DO name="Tmp" type="Tmp 1"/>
                 </LNodeType>
                 <LNodeType id="KVLV solenoid operated" lnClass="KVLV" desc="Solenoid operated 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"/>
                          <DO name="Stuck" type="Stuck_1"/>
                          <!-- Status information -->
                          <DO name="ClsPos" type="ClsPos_1"/>
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<DO name="OpnPos" type="OpnPos_1"/>
                         <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="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"/>
                         <DO name="OpnPos" type="OpnPos 1"/>
                         <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="KVLV_aut_contr" lnClass="KVLV" desc="Automatic controlled isolating</pre>
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"/>
                         <DO name="OpnPos" type="OpnPos_1"/>
                         <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="TLEV_gauge" lnClass="TLEV" desc="Level 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"/>
                         <!-- Measured values -->
                         <DO name="LevPc" type="LevPc 2"/>
                         <DO name="SmpRteSet" type="SmpRteSet 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>
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```
<LNodeType id="TPRS_trans" lnClass="TPRS" desc="Pressure transmitter">
                        <!-- 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 2"/>
                        <!-- Measured values -->
                        <DO name="Pres" type="Pres 2"/>
                        <!-- Settings -->
                        <DO name="SmpRte" type="SmpRte 2"/>
                <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>
                <!-- 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)"/>
                <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_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="Vlm 1" desc="Volume of media in tank"/>
                <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)"/>
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<DOType cdc="SAV" id="Pres_2" desc="Pressure of media [Pa]"/>
              <DOType cdc="SPC" id="Blk 1" desc="Block operation"/>
              <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"/>
              position)"/>
       </DataTypeTemplates>
</SCL>
```