

CoolProp\_IAPWS\_IF97\_Test

CoolProp\_get\_global\_param\_string("version")= "6.1.1dev"

p1:= 101325 Pa      T1:= 308.15 K

1.0 Saturation Test1.1 Saturation ancillary function test (this function does not look for backend strings, even HEOS!)p\_sat(T):= CoolProp\_saturation\_ancillary("water", "P", 0, "T", T)      p\_sat(T1)= 5.63·10<sup>3</sup> Pa

p\_sat(T):= CoolProp\_saturation\_ancillary("HEOS::Water", "P", 0, "T", T)      p\_sat(T1)= ■ Pa

lastError= "key [HEOS::Water] was not found in string\_to\_index\_map in JSONFluidLibrary"

T\_sat(p):= CoolProp\_saturation\_ancillary("water", "T", 0, "P", p)      T\_sat(p1)= 99.98 °C

T\_sat(p):= CoolProp\_saturation\_ancillary("IF97::water", "P", p, "T", 0)      T\_sat(p1)= ■ °C

lastError= "key [IF97::water] was not found in string\_to\_index\_map in JSONFluidLibrary"

1.2 Props function test

p\_sat(T):= CoolProp\_Props("P", "Q", 0, "T", T, "HEOS::water")      p\_sat(T1)= 5629.02 Pa

p\_sat(T):= CoolProp\_Props("P", "T", T, "Q", 0, "IF97::water")      p\_sat(T1)= 5628.62 Pa

T\_sat(p):= CoolProp\_Props("T", "P", p, "Q", 0, "water")      T\_sat(p1)= 99.97 °C

T\_sat(p):= CoolProp\_Props("T", "P", p, "Q", 0, "IF97::water")      T\_sat(p1)= 99.97 °C

2.0 Subcooled or superheated function Testh\_pT(p, T):= CoolProp\_Props("H", "P", p, "T", T, "IF97::water")      h\_pT(p1, T1)= 146.73  $\frac{kJ}{kg}$ rho\_pT(p, T):= CoolProp\_Props("D", "P", p, "T", T, "IF97::water")      rho\_pT(p1, T1)= 994.04  $\frac{kg}{m^3}$ Cp\_pT(p, T):= CoolProp\_Props("C", "P", p, "T", T, "IF97::water")      Cp\_pT(p1, T1)= 4.18  $\frac{kJ}{kg \Delta^{\circ}C}$

$Cv\_pT(p, T) := \text{CoolProp\_Props}("O", "P", p, "T", T, "IF97::water")$

$$Cv\_pT(p1, T1) = 4.10 \frac{kJ}{kg \Delta^{\circ}C}$$

$\mu\_pT(p, T) := \text{CoolProp\_Props}("V", "P", p, "T", T, "IF97::water")$

$$\mu\_pT(p1, T1) = 7.19 \cdot 10^{-4} \text{ s Pa}$$

$\mu\_pT(p, T) := \text{CoolProp\_Props}("V", "P", p, "T", T, "water")$

$$\mu\_pT(p1, T1) = 7.19 \cdot 10^{-4} \text{ s Pa}$$

$k\_pT(p, T) := \text{CoolProp\_Props}("L", "P", p, "T", T, "IF97::water")$

$$k\_pT(p1, T1) = 0.62 \frac{W}{m \Delta^{\circ}C}$$

$k\_pT(p, T) := \text{CoolProp\_Props}("L", "P", p, "T", T, "water")$

$$k\_pT(p1, T1) = 0.62 \frac{W}{m \Delta^{\circ}C}$$