Notes on the function
gsw_enthalpy_diff_CT_exact(SA,CT,p_shallow,p_deep)

This function, **gsw_enthalpy_diff_CT_exact**(SA,CT,p_shallow,p_deep), returns the difference between the specific enthalpy of two seawater parcels, both having the same Absolute Salinity and Conservative Temperature, but having different pressures. This function uses the full TEOS-10 Gibbs function $g\left(S_{\mathrm{A}},t,p\right)$ of IOC *et al*. (2010), being the sum of the IAPWS-09 and IAPWS-08 Gibbs functions.

   This function is simply two calls to each of two GSW functions as follows,

```
t_shallow = gsw_t_from_CT(SA,CT,p_shallow);
t_deep    = gsw_t_from_CT(SA,CT,p_deep);
enthalpy_diff_CT_exact = gsw_enthalpy_t_exact(SA,t_deep,p_deep) - ...
                         gsw_enthalpy_t_exact(SA,t_shallow,p_shallow);
```

References

IAPWS, 2008: Release on the IAPWS Formulation 2008 for the Thermodynamic Properties of Seawater. The International Association for the Properties of Water and Steam. Berlin, Germany, September 2008, available from www.iapws.org. This Release is referred to in the text as **IAPWS-08**.

IAPWS, 2009: Supplementary Release on a Computationally Efficient Thermodynamic Formulation for Liquid Water for Oceanographic Use. The International Association for the Properties of Water and Steam. Doorwerth, The Netherlands, September 2009, available from http://www.iapws.org. This Release is referred to in the text as **IAPWS-09**.

IOC, SCOR and IAPSO, 2010: *The international thermodynamic equation of seawater – 2010: Calculation and use of thermodynamic properties*. Intergovernmental Oceanographic Commission, Manuals and Guides No. 56, UNESCO (English), 196 pp. Available from http://www.TEOS-10.org