

30 January 2009

1 Giltspur Street
London
EC1A 9DD
T +44 (0)20 7294 2468
F +44 (0)20 7294 2400
www.cityandguilds.com

Dear centre

Important changes to the 6127-302 Complex Refrigeration & Air Conditioning Systems examination

City & Guilds has recently undertaken a comprehensive review of all 6127 Refrigeration & Air Conditioning online (GOLA) question banks. Following this review and feedback from centres we have made a number of amendments to the unit 302 Complex Refrigeration & Air Conditioning Systems part 2 examination.

A number of the 'exhibits' which candidates have found difficult to use have been removed. Instead, we have published six charts in pdf format on the 6127 qualification page of the City & Guilds website (www.cityandguilds.com) which **you will need to print and have available for candidates** to use during this exam. We hope that being able to physically plot points onto graphs will dramatically improve the exam experience for all candidates. You may find it more convenient to laminate copies of the charts and provide candidates with OHP pens or similar, so they can be used for each exam sitting, but paper copies are equally acceptable.

In addition to this, **you will need to ensure all candidates have access to a refrigerant comparator** which includes refrigerants R22 and R407C in order to answer some questions which may be asked.

The new exam format will be live from 1 March 2009.

Yours sincerely

Built Environment team
Construction & Engineering Technology
City & Guilds



Instructions for use

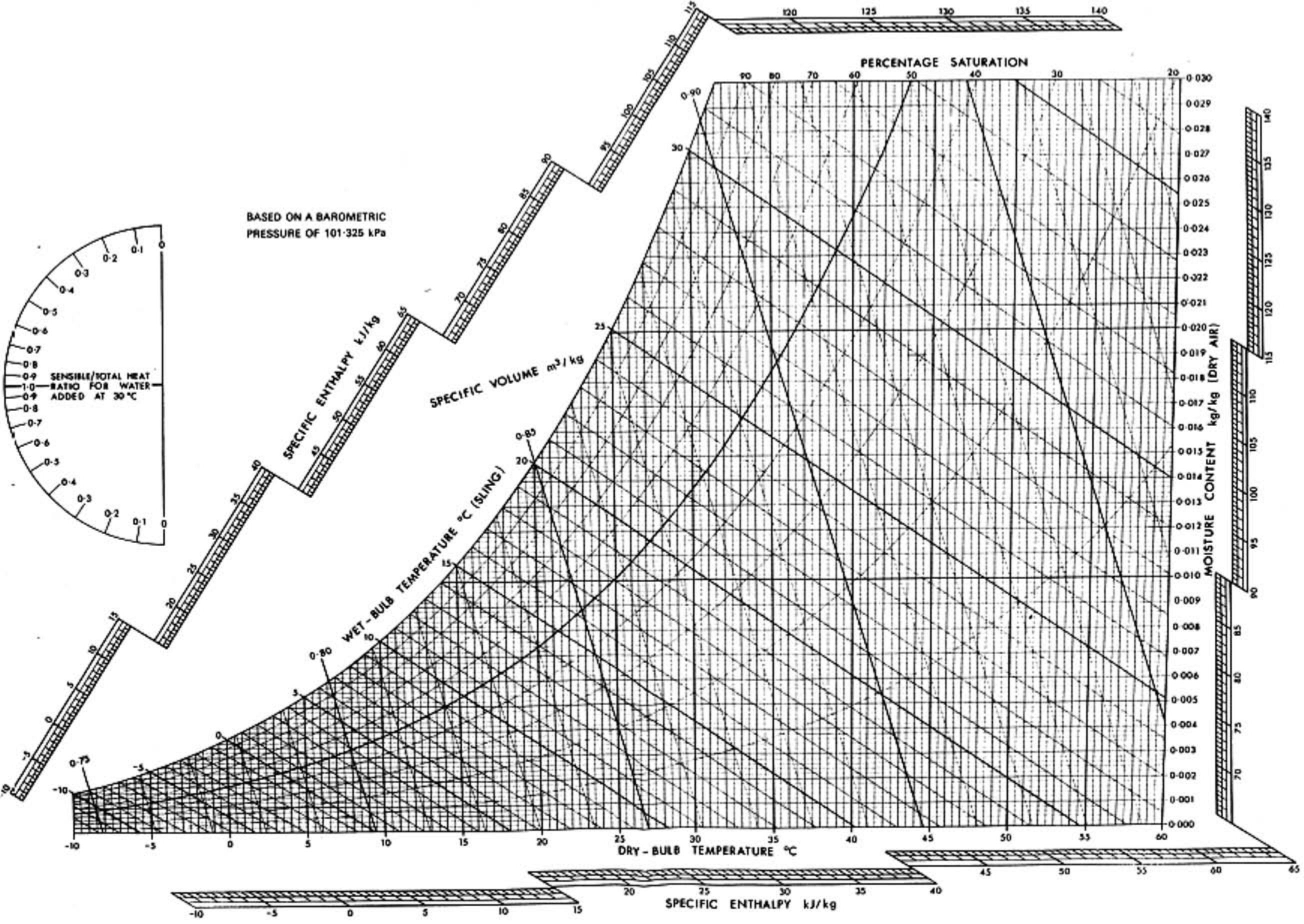
The enclosed pdf document contains six graphs. NB, the psychrometric chart is reproduced twice, as candidates may require it for a number of questions.

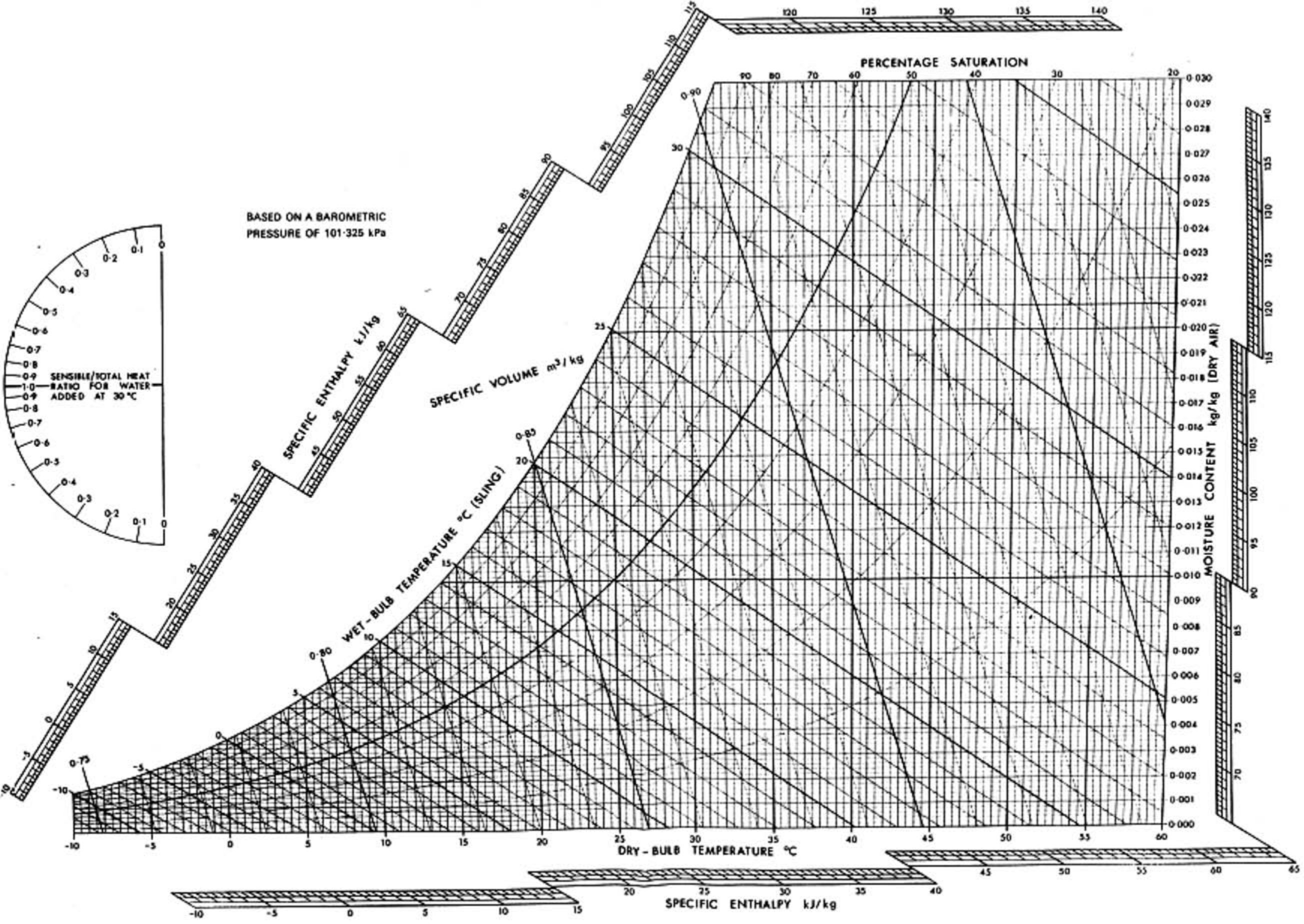
This booklet **must** be made available to all candidates sitting the 6127-302 examination from 1 March 2009 onwards.

In addition, candidates will require access to a **refrigerant comparator** which includes refrigerants R22 and R407C in order to answer some questions within the GOLLA question bank.

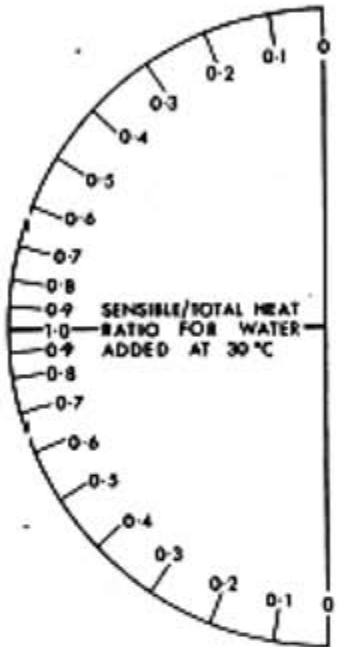
These pdfs can be printed on paper each time, or centres may find it easier to print and laminate copies which can be used more than once with wipe-clean pens.

City & Guilds recommends these pdfs are printed in **colour**, and to **A3** size, as this makes them easier for candidates to use.





BASED ON A BAROMETRIC
 PRESSURE OF 101.325 kPa



SPECIFIC ENTHALPY kJ/kg

SPECIFIC VOLUME m³/kg

WET-BULB TEMPERATURE °C (SLING)

DRY-BULB TEMPERATURE °C

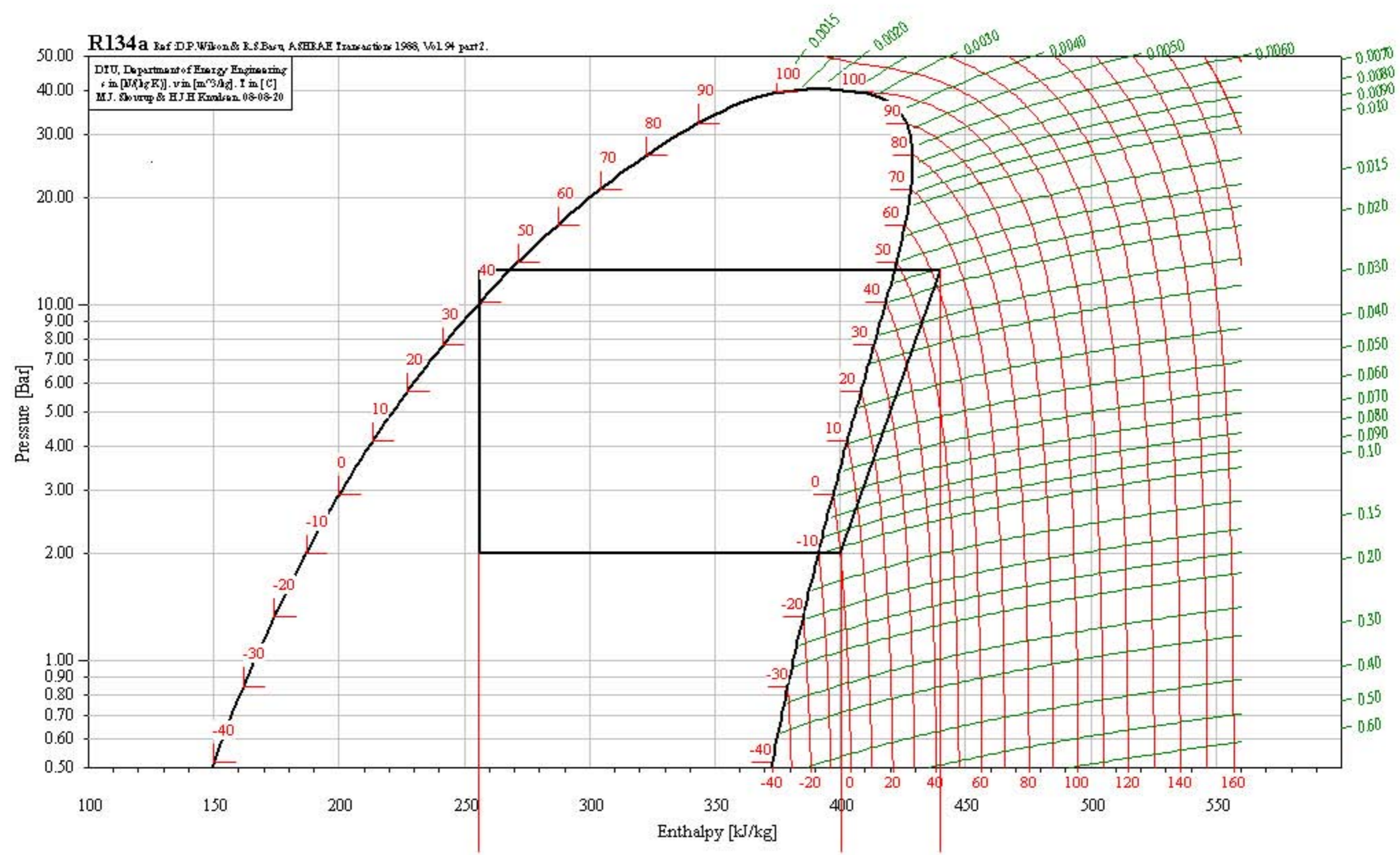
SPECIFIC ENTHALPY kJ/kg

MOISTURE CONTENT kg/kg (DRY AIR)

PERCENTAGE SATURATION

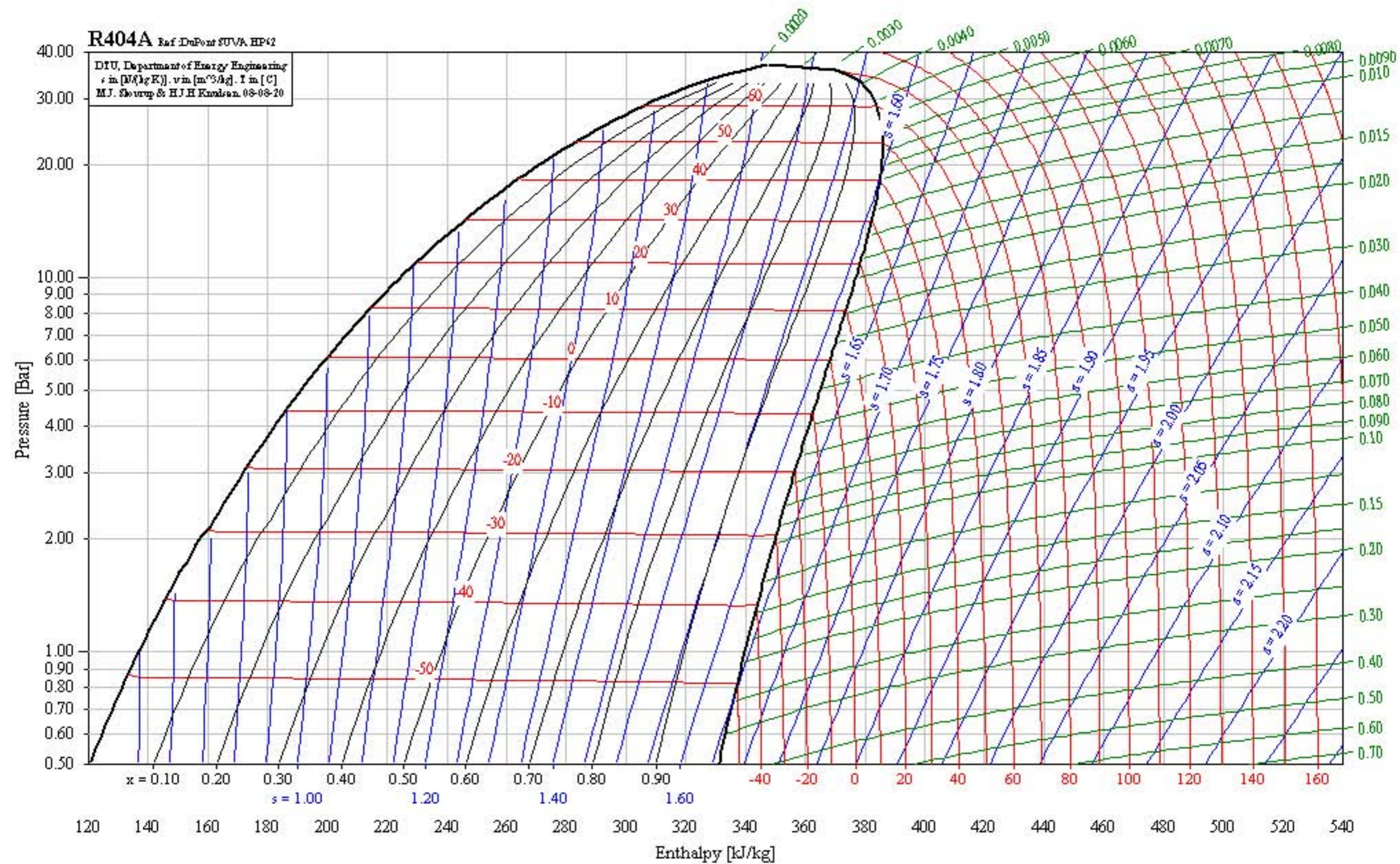
R134a Ref: D.P. Wilson & E.S. Barr, ASHRAE Transactions 1988, Vol. 94 part 2.

DTU, Department of Energy Engineering
 v in [m³/kg], v in [m³/kg], T in [°C]
 M.J. Skovrup & H.J.H. Knudsen, 08-08-20



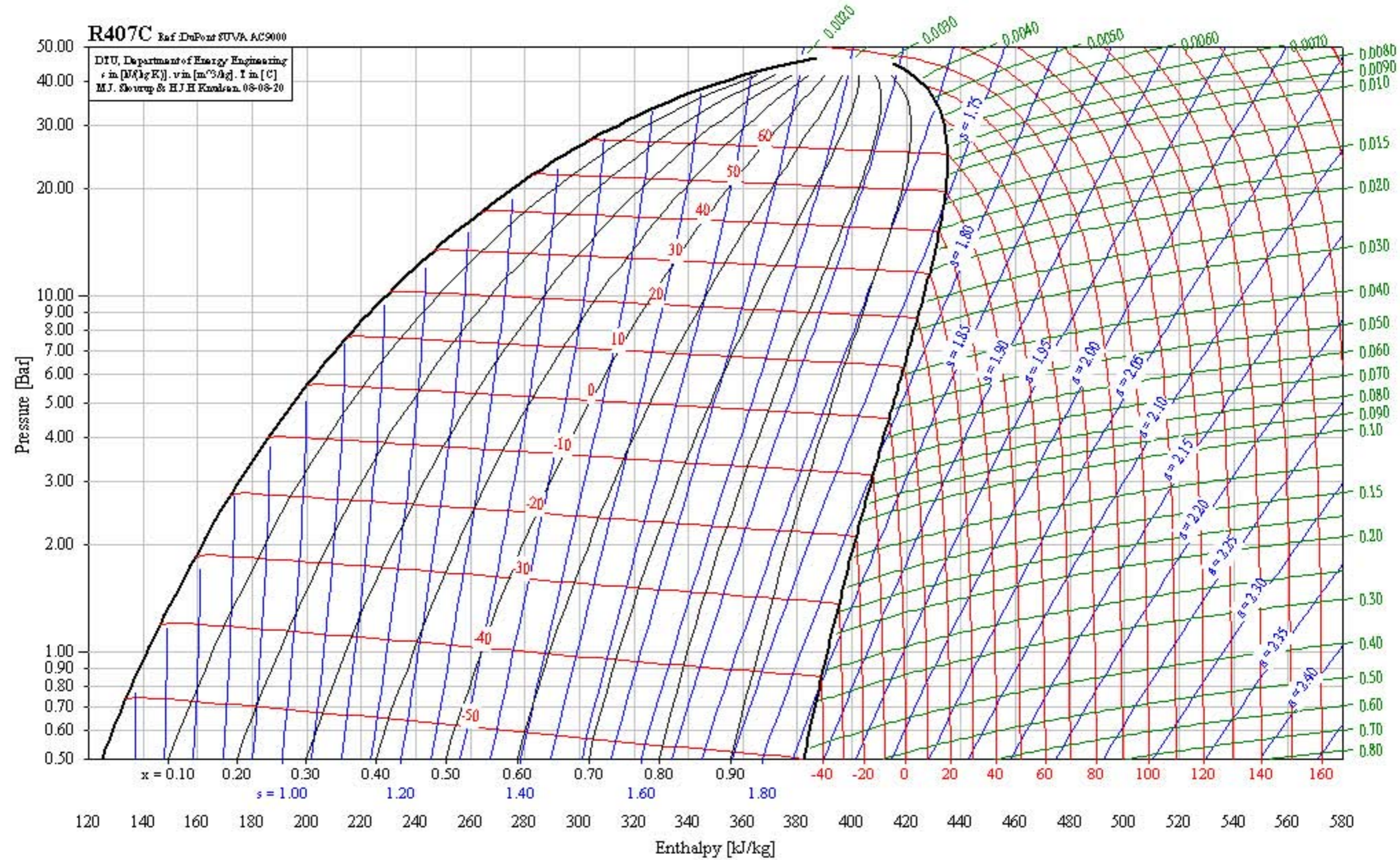
R404A Ref. DuPont SUVA HP42

DTU, Department of Energy Engineering
 s in [kJ/kgK], v in [m³/kg], T in [°C]
 M.J. Skovrup & H.J.H. Knudsen, 08-08-20



R407C Ref. DuPont SUVA AC9000

DTU, Department of Energy Engineering
 s in [M/(kg K)], v in [m³/kg], T in [C]
 M.J. Skovrup & H.J.H. Knudsen, 08-08-20



R22 Ref E.C Downing, ASHRAE Transactions 1974, Paper No. 2313.

DTU, Department of Energy Engineering
 ρ in $[M/kgK]$, v in $[m^3/kg]$, T in $[C]$
 M.J. Skovrup & H.J.H. Knudsen, 08-08-20

