Activities in Poland with regard to training and awareness raising on flammable and slightly flammable refrigerants

- □ In para 4 (4)(8) of the Regulation by Minister of Development and Finance of 7 December 2017 concerning evaluation and certification of personnel with regard to fluorinated greenhouse gases and controlled substances it is required that the programme of the theoretical and practical exam (and consequently also of the training) includes, inter alia "technologies which are applied in order to replace fluorinated greenhouse gases and diminish their use". It means in practice that in order to receive the F-gas certificate in RAC&HP sector the person has to acquire theoretical knowledge and practical skills concerning handling of alternative refrigerants including flammable and slightly flammable substances.
- ⇒ Following that requirement all training centres in Poland which organize courses related to F-gas certification in RAC&HP sector are obliged to include in their programmes the issue of alternative technologies that cover, inter alia, flammable or slightly flammable refrigerants
- ⇒ Based on the Regulation by Minister of Development and Finance of 7 December 2017 (Polish J. of Acts of 2017, item 2417) concerning the minimum tools, procedures and system of maintaining records on the activities with regard to installation, maintenance or servicing, repair or decommissioning of equipment containing fluorinated greenhouse gases the servicemen and service companies are obliged to keep records of the activities on equipment, so it prevents e.g. direct retrofitting of the RAC&HP equipment with flammable or slightly flammable refrigerants. The activities on equipment containing 5 t of CO₂ eq or more of FGgases are also recorded in the electronic logbooks maintained by the equipment operators and stored in the electronic Central Database of Reports. If the equipment is replaced with equipment using alternative technologies, including those where flammable or slightly flammable refrigerants are applied, such replacement is also recorded.
- Our PROZON Foundation that actively participates in the Real Alternatives Project developed the training curricula for training courses for RAC&HP technicians devoted solely to alternative refrigerants. The programme of courses on transcritical CO₂ has already been completed and the series of courses will start soon. The programme of courses on flammable and slightly flammable refrigerants will be completed in the next few months and the relevant courses will start right after that.
- Also at the relevant Faculties of Polish Technical Universities the issue of flammable refrigerants is included in education curricula and special seminars are organized on this topic. Example is a very detailed seminar on the use of hydrocarbons in refrigeration equipment, specifically in the context of limitations of that use due to safety problems that was organized at the Mechanical Faculty of Gdańsk Technical University.
- ⇒ Our major RAC&HP Association (KFCH) developed the following booklets:
 - "Equipment using refrigerants with A2L and A3 flammability" describing the use of flammable and slightly flammable refrigerants and pointing out the relevant safety issues.

 "Stay in the business – stop installing the systems using R-404A and R-507A" pointing out at the threat of continuing the installation of such equipment and the need of transition to alternative technologies.

The booklets will soon be widely distributed among the companies and institutions which are members of that Association and will be available on the Association's website. The Association also developed and made available a calculator containing accepted charges of A2L and A3 refrigerants depending on equipment type.

□ In our main Journal on Refrigeration and Air Conditioning (Chłodnictwo I Klimatyzacja) that is widely distributed among RAC&HP service companies and technicians an excellent two-part technical paper "Hydrocarbons as refrigerants" was published in the end of 2015. In this paper all aspects of the use of hydrocarbons as refrigerants in practice, including safety, were described in detail. Similar paper on slightly flammable refrigerants (HFC-32, HFO-1234yf) was published in the same Journal in 2016.

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