

# Supplementary instructions

Regulations for radar level measuring instruments with radio approvals

## VEGAPULS 42



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**VEGA**

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## 1 About this document

### 1.1 Function

This manual is an additional document to the respective operating instructions manual of VEGAPULS 42 radar level measuring instruments.

It contains regulations for the use of the instruments according to the radio approvals.

Therefore, read them before setup and keep them as a product component in the immediate vicinity of the instrument and accessible at all times.

## 2 Certificates and approvals

### 2.1 Europe

#### Standards fulfilled

The instrument was tested according to the latest issue of the following harmonized standards:

- EN 302372 - Tank Level Probing Radar

#### Scope

In the countries of the EU, the use inside closed vessels is therefore permitted.

In the countries of the CEPT the use is permitted, provided that the corresponding rules of the radio regulation ECC Recommendation 70-03 have been implemented.

#### Receiver test

For the receiver test, which covers the influence of an interfering signal on the device, the performance criterion has at least the following performance level according to ETSI TS 103 361 [6]:

- Performance criterion: Variation of the measured value during distance measurement under interference conditions
- Performance level:  $\Delta d \leq \pm 50$  mm

#### Operating conditions

For operation inside of closed vessels, points a to f in annex E of EN 302372 must be fulfilled.

### 2.2 USA

#### Fulfilled standards

##### FCC § 15.19 Labelling requirements

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation

##### FCC § 15.21 Information to user

"Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment."

##### FCC § 15.105 statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and

on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

#### **FCC § 15.209 statement**

This device is approved for unrestricted use only inside closed, stationary vessels made of metal, reinforced fiberglass or concrete.

#### **RF Exposure Requirements**

To comply with FCC RF exposure compliance requirements, the device must be installed to provide a separation distance of at least 20 cm from all persons.

### **2.3 Canada**

#### **Fulfilled standards/Normes respectées**

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### **Canada Class B statement**

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

#### **RF Exposure Requirements**

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

#### **Déclaration d'exposition aux radiations**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

#### **Operating conditions/Conditions d'exploitation**

This device has been approved for closed containers with the following limitations:

- Closed Containers: For installations utilizing a tilt during installation: This device is limited to installation in a completely enclosed container made of metal, reinforced fiberglass or concrete to prevent RF emissions, which can otherwise interfere with aeronautical navigation
- The installation of the TLPR device shall be done by trained installers, in strict compliance with the manufacturer's instructions.
- This device shall be installed only at fixed locations. The LPR device shall not operate while being moved or while inside a moving container
- Hand-held applications are prohibited.
- Marketing to residential consumers is prohibited.
- The use of this device is on a "no-interference, no-protection" basis. That is, the user shall accept operations of high-powered radar in the same frequency band which may interfere with or damage this device
- However, devices found to interfere with primary licensing operations will be required to be removed at the user's expense
- The installer/user of this device shall ensure that it is at least 10 km from the Dominion Astrophysical Radio Observatory (DRAO) near Penticton, British Columbia. The coordinates of the DRAO are latitude 49°19'15" N and longitude 119°37'12" W. For devices not meeting this 10 km separation (e.g., those in the Okanagan Valley, British Columbia,) the installer/user must coordinate with, and obtain the written concurrence of, the Director of the DRAO before the equipment can be installed or operated. The Director of the DRAO may be contacted at 250-497-2300 (tel.) or 250-497-2355 (fax). (Alternatively, the Manager, Regulatory Standards, Industry Canada, may be contacted.)

Cet appareil est homologué pour une utilisation dans les cuves fermées avec les restrictions suivantes:

- Cuves fermées : Pour les installations impliquant une inclinaison lors de l'installation : cet appareil ne doit être installé que dans une cuve totalement fermée en métal ou en béton, pour empêcher les émissions RF susceptibles d'interférer avec la navigation aéronautique
- L'installation d'un dispositif TLPR doit être effectuée par des installateurs qualifiés, en pleine conformité avec les instructions du fabricant
- Cet appareil ne doit être installé qu'à des emplacements fixes. L'appareil LPR ne doit pas être utilisé pendant qu'il est en train d'être déplacé ou se trouve dans un conteneur en mouvement
- Les applications portables sont interdites
- La vente à des particuliers est interdite
- Ce dispositif ne peut être exploité qu'en régime de non-brouillage et de non-protection, c'est-à-dire que l'utilisateur doit accepter que des radars de haute puissance de la même bande de fréquences puissent brouiller ce dispositif ou même l'endommager
- D'autre part, les capteurs de niveau qui perturbent une exploitation autorisée par licence de fonctionnement principal doivent être enlevés aux frais de leur utilisateur

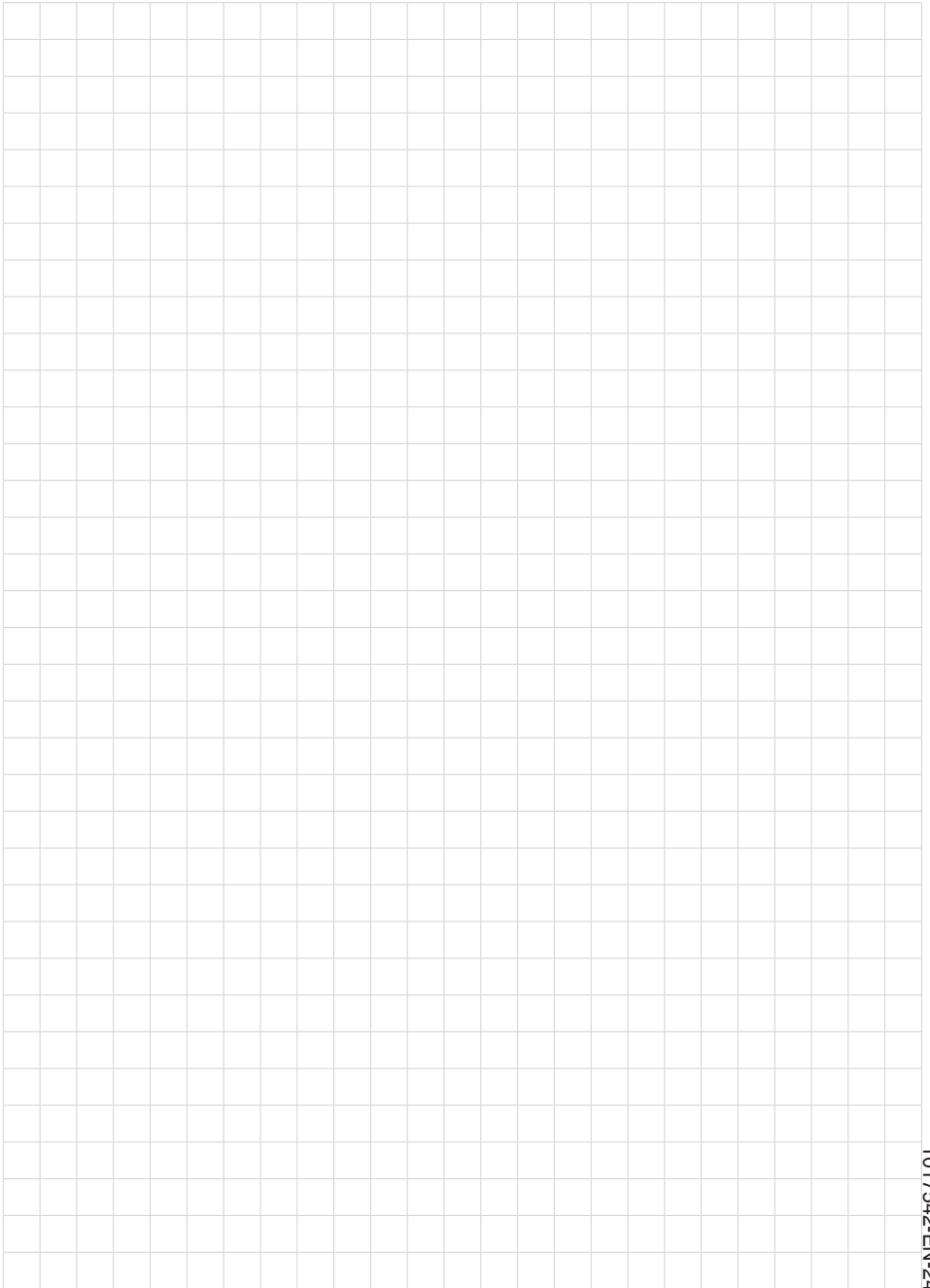
- La personne qui installe/utilise ce capteur de niveau doit s'assurer qu'il se trouve à au moins 10 km de l'Observatoire fédéral de radioastrophysique (OFR) de Penticton en Colombie-Britannique. Les coordonnées de l'OFR sont : latitude N 49° 19' 15", longitude O 119° 37' 12". La personne qui installe/utilise un dispositif ne pouvant respecter cette distance de 10 km (p. ex. dans la vallée de l'Okanagan [Colombie-Britannique]) doit se concerter avec le directeur de l'OFR afin d'obtenir de sa part une autorisation écrite avant que l'équipement ne puisse être installé ou mis en marche. Le directeur de l'OFR peut être contacté au 250-497-2300 (tél.) ou au 250-497-2355 (fax). (Le Directeur des Normes réglementaires d'Industrie Canada peut également être contacté).

## 2.4 New Zealand

### Operating conditions

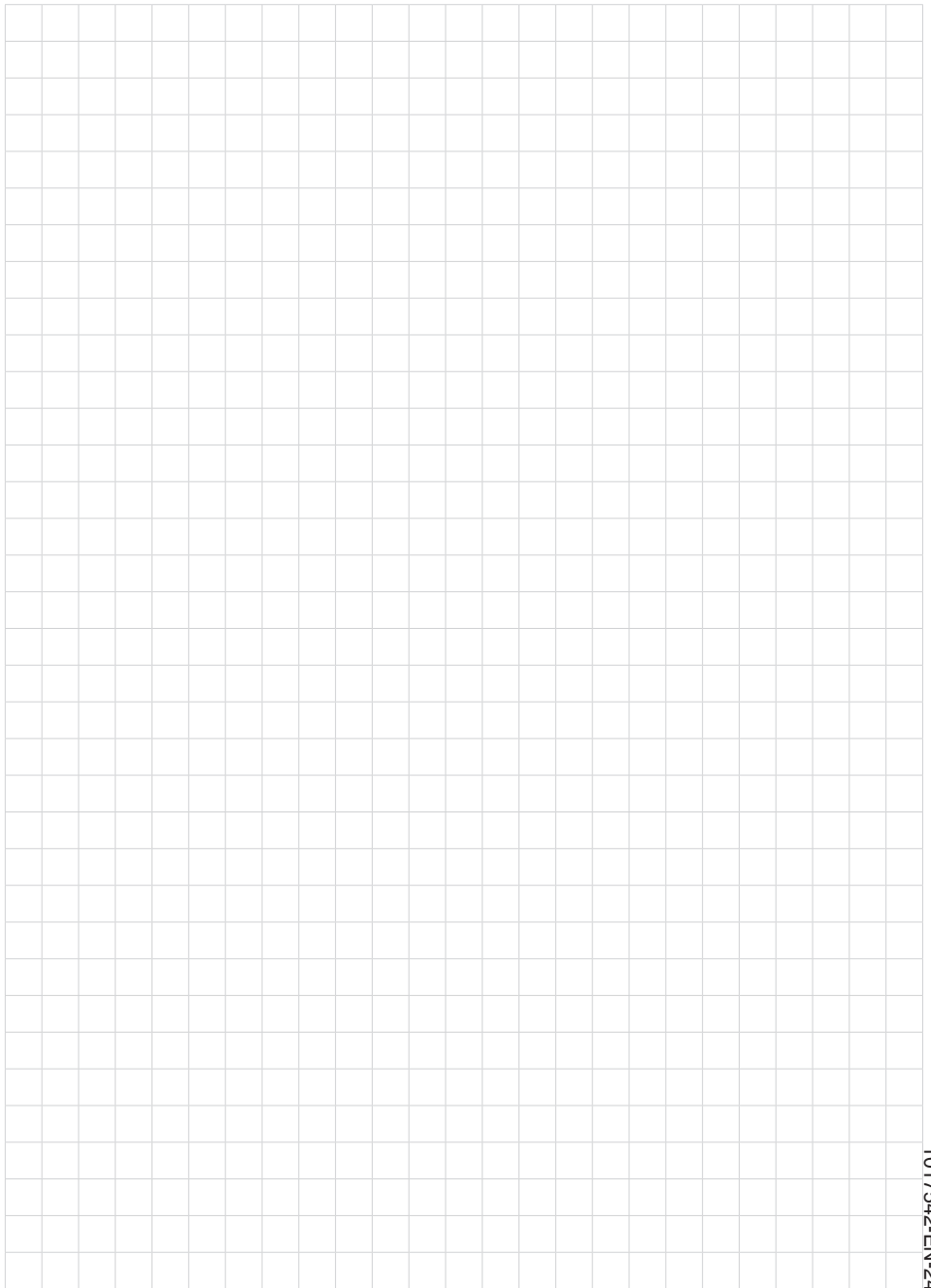
The points a to f in annex E of EN 302372 must be fulfilled.

- a) TLPR are required to be installed at a permanent fixed position at a closed (not open) metallic tank or reinforced concrete tank, or similar enclosure structure made of comparable attenuating material;
- b) flanges and attachments of the TLPR equipment shall provide the necessary microwave sealing by design;
- c) sight glasses shall be coated with a microwave proof coating when necessary (i.e. electrically conductive coating);
- d) manholes or connection flanges at the tank shall be closed to ensure a low-level leakage of the signal into the air outside the tank;
- e) whenever possible, mounting of the TLPR equipment shall be on top of the tank structure with the orientation of the antenna to point in a downward direction;
- f) installation and maintenance of the TLPR equipment shall be performed by professionally trained individuals only.











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All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

Subject to change without prior notice

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