Questionnaire for the evaluation of continuous discharge measuring systems

OTT Hydromet GmbH

Ludwigstrasse 16
87437 Kempten · Germany
Tel. +49 831 5617-0
Fax +49 831 5617-209

info@ott.com
www.ott.com

As at 06-0518

Measuring Site

- Gauging station _____
- River _____

Contact person

- Name _____
- Authority _____
- Address _____
  _____
  _____
- Phone _____
- Cell Phone _____
- E-mail _____

Planned measuring system

- Side-Looking Doppler flow velocity measurement **OTT** SLD ☐
- Radar-Doppler surface velocity measurement **OTT** SVR 100 ☐

Characteristics of the river

Type of river	free flowing watercourse	☐
	factory outlet	☐
	navigation channel	☐
	irrigation channel	☐
	waste water channel	☐
	influenced by back stream	☐ yes ☐ no
Geometry of the river	mean width	..... m
	mean depth	..... m
	divided cross section (e. g. by pier)	☐ yes ☐ no
	sloped bank; slope (e. g. 1:3)	☐ ..... : .....
	perpendicular bank	☐
	profile hollow shaped	☐
	trapezoid profile	☐
	rectangular profile	☐
	combined trapezoid/rectangular	☐

Hydrological issues

▶ Discharge	low discharge	..... m^3/s
	mean low discharge	..... m^3/s
	mean discharge	..... m^3/s
	mean high discharge	..... m^3/s
	high discharge	..... m^3/s
▶ Water level	low water level	..... cm
	mean low water level	..... cm
	mean water level	..... cm
	mean high water level	..... cm
	high water level	..... cm
▶ Gauge datum with bench mark		..... m

Hydraulical issues

▶ Alignment of the river	straight	☐	weak bends	☐
	meander	☐	strong bends	☐
▶ Velocity distribution in the cross section	regular			☐
	non regular			☐
▶ Influence by vegetation in the cross section	bank with vegetation			☐
	bottom with vegetation			☐
▶ Influence by ice coverage	ground ice			☐
	ice paste			☐
	closed ice coverage; thickness approx.			☐ ..... cm
▶ Influence by wind	without			☐
	strong			☐
	weak			☐
Main wind direction	against direction of flow			☐
	in direction of flow			☐
	diagonally to the direction of flow			☐
▶ Water surface characteristic	smooth			☐
	little waves			☐
	strong waves			☐
	standing waves			☐
	macroturbulence			☐

Velocity issues

▶ Velocity	mean velocity v_m	..... m/s
	max. velocity v_{max}	..... m/s
	min. velocity v_{min}	..... m/s
	max. surface velocity v_{omax}	..... m/s

Influence by navigation

▶ Shipping traffic	constant	☐	temporary	☐	none ☐

Morphological issues

- State of cross section
  - natural ☐
  - developed ☐
  - divided ☐
  - non divided ☐
- State of the bank
  - natural ☐
  - stabilized ☐ with _____
- State of the bottom
  - natural ☐
  - stabilized ☐ with _____
- Roughness on bottom
  - strong ☐
  - medium ☐
  - weak ☐
- State of foreshore
  - strong slope ☐
  - weak slope ☐
  - strongly overgrown ☐ with _____
  - weakly overgrown ☐ with _____
  - cross section available? ☐ yes ☐ no
  - site map available? ☐ yes ☐ no
  - photographs of meas. site available? ☐ yes ☐ no

Please add profiles, maps and photos as attachment. (Please mark this in the section “attachments to the questionnaire” on page 6.)

- Remarks to the environment of the measuring site (e .g. distance to pumping stations, sluices, weirs, inflow of tributaries and so on).

_____

_____

_____

_____

_____

Physical aspects

- Vertical temperature gradient ☐ yes ☐ no
- Horizontal temperature gradient ☐ yes ☐ no
- Gradient of salinity ☐ yes ☐ no
- Concentration of suspended materials
  - strong ☐
  - weak ☐
  - medium ☐
- Max. concentration of suspended materials ..... mg/l
- Upper stream air supply ☐ yes ☐ no

  by _____ in ..... m distance

Aspects of measuring site equipment and logistics

- Distance sensor ↔ gauging station/housing ..... m
- Structures in the water
  - groynes ☐
  - bridge piers ☐
  - stakes ☐
- Access to the measuring site
  - street ☐
  - country lane ☐
  - meadow ☐
  - impassable ☐
  - others ☐
- Mounting OTT SVR 100
  - bridge ☐
  - jib ☐

System Components

- Gauging station ☐ available ☐ planned
- Prot. housing with earth base ☐ available ☐ planned
- Prot. housing with concrete base ☐ available ☐ planned
- Prot. housing wall mounted ☐ available ☐ planned
- Prot. housing pole mounted ☐ available ☐ planned
- Mains power supply ☐ available ☐ planned
- Solar power supply ☐ available ☐ planned
- Telephone line ☐ available ☐ planned type _____
- Modem (ISDN/2G/3G/4G) ☐ available ☐ planned type _____
- Satellite transmitter ☐ available ☐ planned
- Datalogger ☐ available ☐ planned
  - – OTT netDL ☐
  - – OTT ..... ☐
  - – third-party supplier ☐ brand/type _____
    communication interface _____
- Water level sensor ☐ available ☐ planned
- Additional sensors _____
- Measuring system for continuous discharge measurement at or near the planned measuring site already existing? ☐ yes ☐ no

  Additional information _____

Planned preparation work to be done by the customer

(e.g. cable troughs, installation of protection tubes, power supply, request for approvals, river engineering, diver works and so on)

Further remarks

- Date _____
- Signature _____

Attachments to the questionnaire

- Profiles ☐
- Maps ☐
- Photos ☐