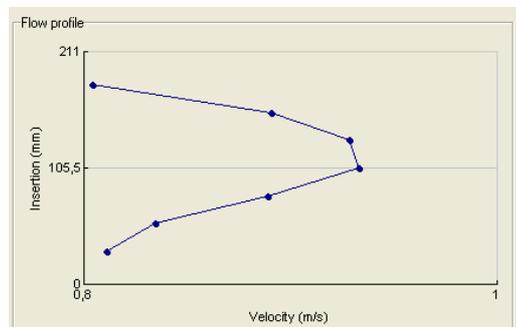


HydrINS2 / HydrINS 2 Mini

Overview of velocity profiling with Winfluid



Review	Date	Redaction	Changes	Visa
00	08/03/2011	MRE	Creation	

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1 Introduction

Editing velocity profile allows to calculate precise profile coefficient and then to obtain best velocity measurement.

2 Velocity profiling software launching

It can be launched from two ways :

From Expert mode

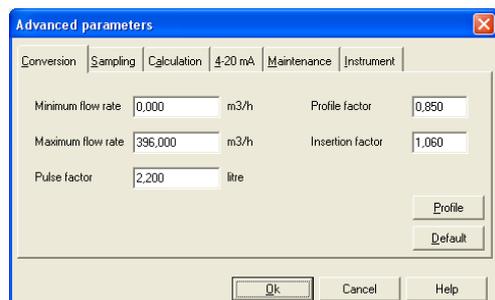


Figure 1 : Launching from expert mode during probe programming in Winfluid

From Winfluid main window

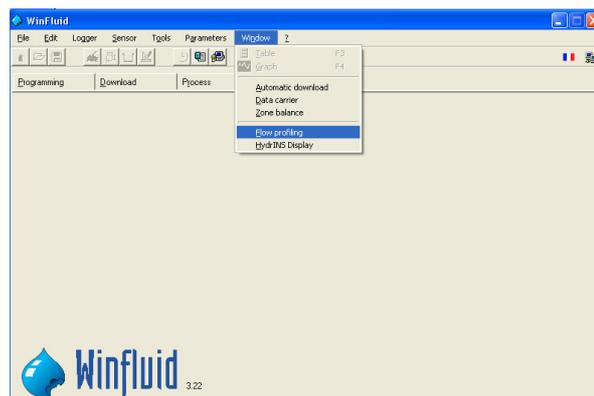


Figure 2 : Launching from Winfluid main window

3 Software configuration

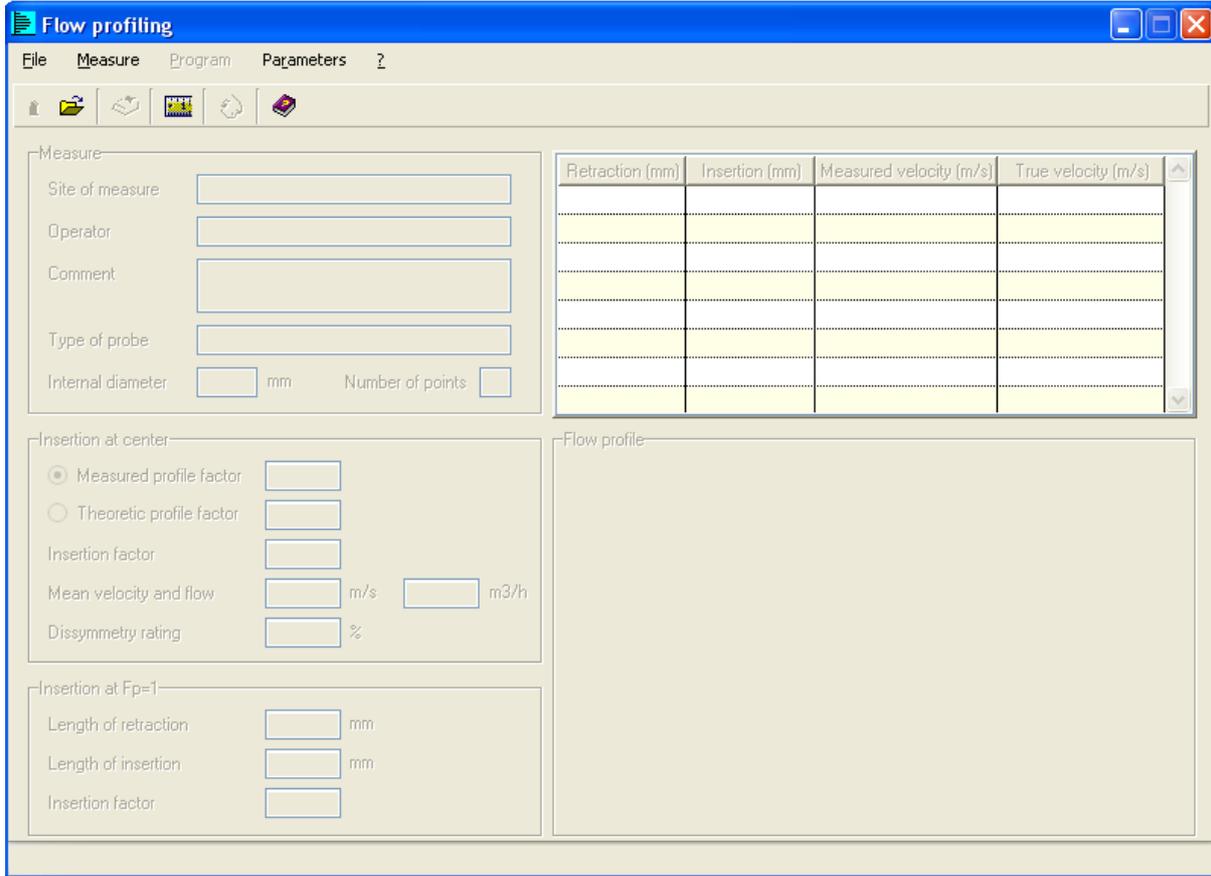


Figure 3 : Profile editing window

Click on **Parameters** in toolbar to configure program parameters :

Click on OK to validate

To achieve profile measurements, click on  icon.

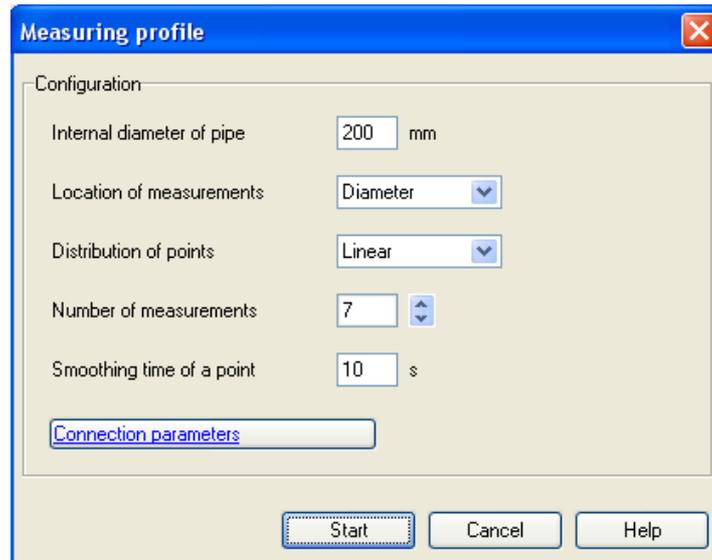


Figure 4 : Parameters for flow profiling

Connect **HydrINS 2/HydrINS 2 flowmeter** to PC using CC_HYDA3 cable.



Figure 5 : Connection of CC_HYDA3

Insert the probe at the bottom of the pipe

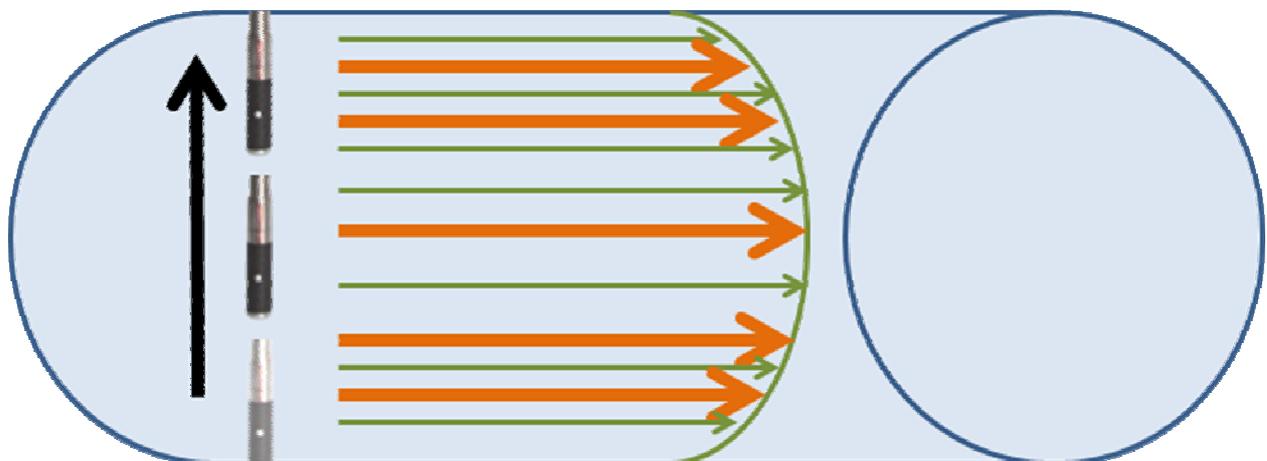


Figure 6 : Way for velocity profiling

Click on **Start**.

The software interface is titled "HydrINS N° 23869". It features two main sections for data entry:

- Insertion au centre:**
 - Coefficient de profil mesuré
 - Coefficient de profil théorique (value: 0.913)
 - Coefficient d'insertion (value: 1.064)
 - Vitesse moyenne (input field) m/s
 - Débit moyen (input field) m3/h
 - Dissymétrie (input field) %
- Insertion à Fp=1:**
 - Longueur remontée (input field) mm
 - Longueur insertion (input field) mm
 - Coefficient d'insertion (input field)

Below these sections is a table with the following data:

	Remontée (mm)	Insertion (mm)	Vitesse mesurée (m/s)	Vitesse réelle (m/s)	Coef. insertion	Coef. profil
1	0.0	170.0			0.974	
2	23.3	146.7			1.003	
3	46.7	123.3			1.032	
4	70.0	100.0			1.064	
5	93.3	76.7			1.089	

At the bottom, there is a "Point de mesure" section with input fields for:

- Longueur remontée: 0.0 mm
- Longueur insertion: 170.0 mm
- Vitesse mesurée: 0.110 m/s
- Vitesse réelle: 0.107 m/s

Two graphs are displayed:

- Vitesse réelle (m/s):** A line graph showing fluctuating velocity values between 0 and 0.2 m/s.
- Profil de vitesse:** An empty coordinate system with a vertical axis from 0 to 200 and a horizontal axis from 0 to 1.

Buttons at the bottom include: Effacer, Mesurer, Valider, Abandon, and Aide.

Figure 7 : Velocity profile measurement window

Click on **measurement** for the 7 points of the profile

After validation, the following window is displayed :

Validation

Identification

Nom du site

Opérateur

Commentaire RAS

Insertion au centre

Coefficient de profil mesuré -0.898

Coefficient de profil théorique 0.913

Coefficient d'insertion 1.064

Insertion à Fp=1

Longueur remontée 157 mm

Longueur insertion 13 mm

Coefficient d'insertion 1.168

Programmer les coefficients

Pour une insertion au centre Ne pas modifier les coefficients

Pour une insertion à Fp=1

Ok Abandon Aide

Figure 8 : Profile plots validation window

A dissymmetry factor is used to validate or invalidate the profile (profile is valid with less than 5 % of dissymmetry)

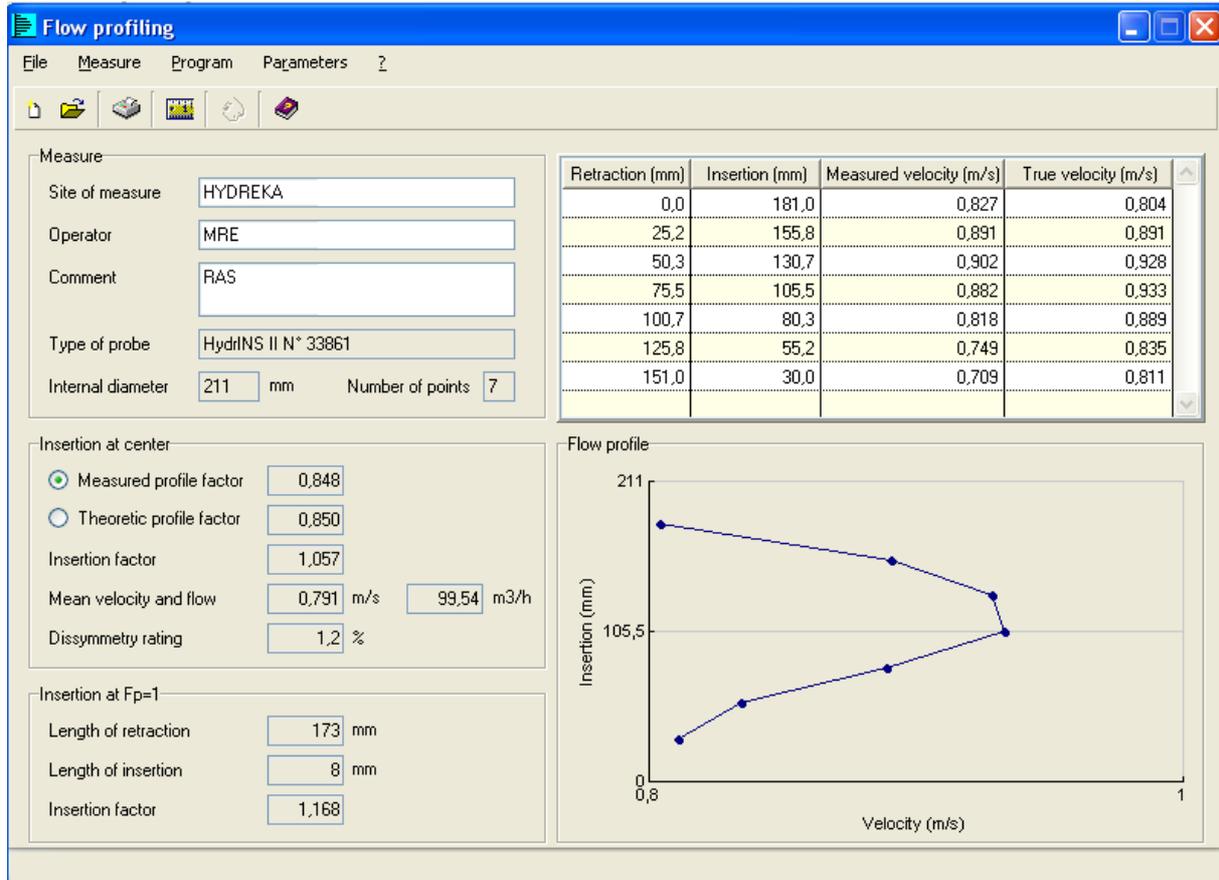


Figure 9 : Profile results overview window

Profile can be saved by clicking on **File > Save**

4 Using profile

Each profile is saved in a database, and is useful to :

- Programming optimum configuration of HydrINS 2 / HydrINS 2 Mini probe in Winfluid.
- Profile printing in pdf, word excel

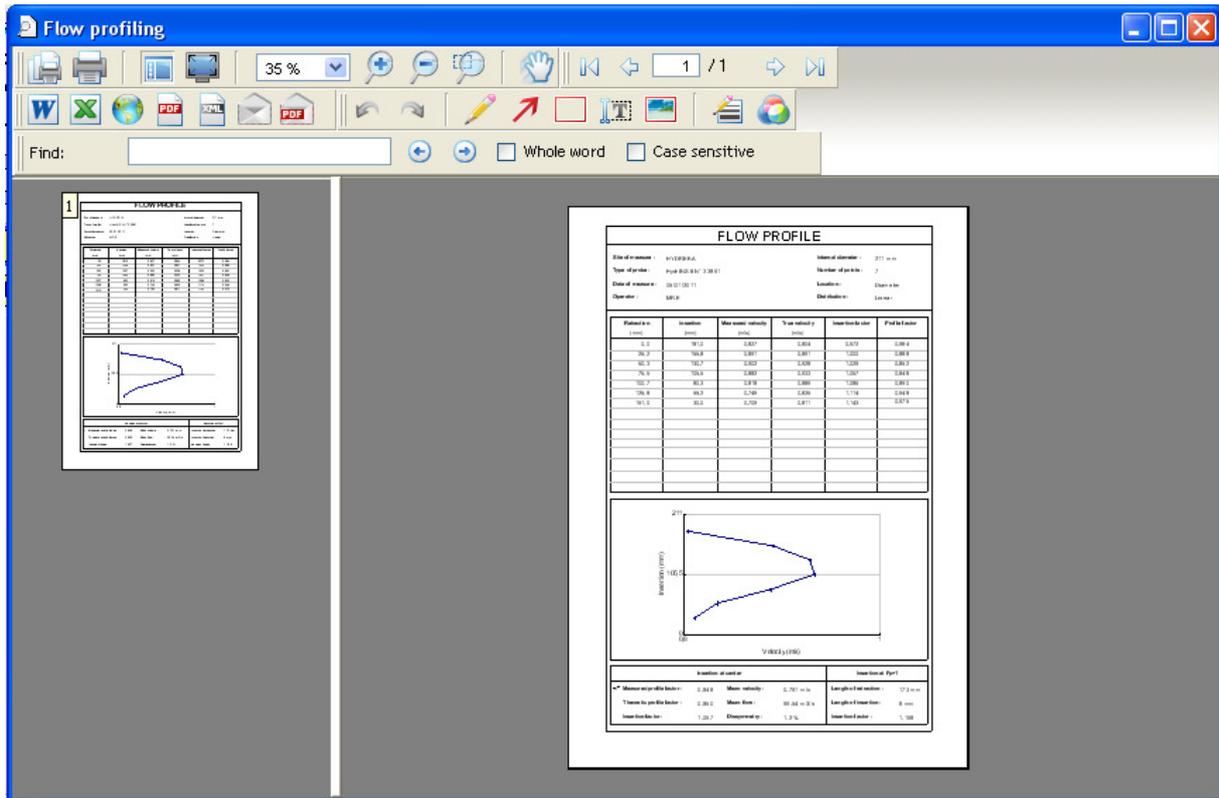


Figure 10 : Velocity profile printing

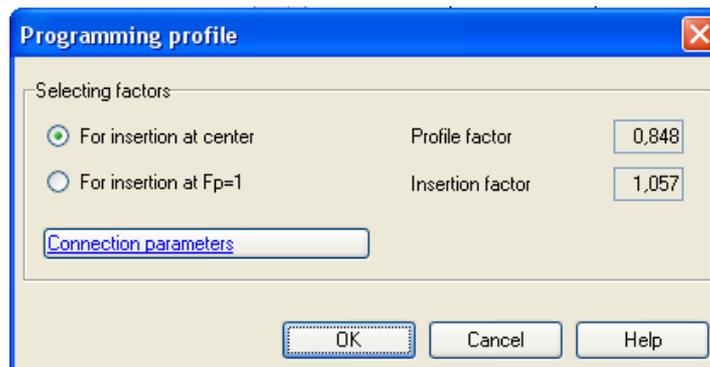


Figure 11 : HydrINS 2 / HydrINS 2 Mini programming

5 Import in Winfluid

The following parameters can be imported in Winfluid in order to program measurement parameters of the probe.

- Pipe Internal diameter
- Probe position
- Insertion factor
- Profile factor

The prerequisite is to launch profiling software from Expert mode.

NOTES

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