MINUTES OF PRE-BID MEETING HELD ON 18th Aug 2020

Brief description of Tender Enquiry:	Supply of 50 nos. Seismic Data Acquisition Systems (DASs), for National Seismological Network.
Tender Enquiry Reference number and Date:	NCS-2020/NSN/Seismic DAS Date: 5th August 2020
Date and Time of Pre-bid meeting:	18th August 2020 at 1100 Hrs
Venue of Pre-bid meeting:	Vrishti Auditorium, Mausam Bhavan Complex, Lodi Road, New Delhi-110 003

Representatives of following Bidders were attended the pre-bid meeting:

S.No.	Name of the firm / Bidder	Firm Representatives
1	M/s Chrisvin Geomet Services Pvt. Ltd., Chennai	D. Surendran
2.	M/s Pinnacle Geosystem Pvt. Ltd, Delhi	Shri Vinod Tamar
3.	M/s Toshniwal Technologies Pvt. Ltd, New Delhi	Shri Rakesh Kumar Shri Sunil Toshniwal

The following officials from NCS were present in the pre-bid meeting to clarify the queries of the prospective bidders.

S.No.	Name and Designation
1.	Dr. G. Suresh, Scientist-F, NCS
2.	Sh. Manik Chndra, Scientist-F, IMD
3.	Sh. R.K. Singh, Scientist-E, NCS
4.	Sh. Ganesh Iyer, Met-A, NCS

The responses to the queries sought from prospective bidders during the meeting have been compiled and are given below:

1. **Clause 33.2:** 70% payment shall be made on receipt of entire goods/stores and 30% on Test and Acceptance.
2. **Clause 46.1** Read the **"**Replacement of DASs at**"** as **"**Supply of DASs for**"**
3. **Clause nos. 46.4, 46.5, 46.6, 47.21, 49, 55.1, 55.2 and 55.3** Deleted
4. **Clause 47.14:** Read as "Hardware gain should be UNITY".
5. **Clause 55.4**: This clause must be read as "56.8"
6. **Clause 55.5**: This clause must be read as "56.9"
7. **Clause 56.1:** Read as **"**All the stores should be delivered at NCS HQ and at CRS locations in 4 (four) months from the date of issue of work order"**.**
8. **Clause 56.3:** Read as "The safe delivery of the instruments to NCS HQ and at central receiving stations (CRS) will be the responsibility of the bidder.".
9. **Clause 56.6:** This clause must be read as "50.2.3.14"
10. **Clause 48:** Connector pin diagrams for different sensors are as follows.
    i. **STS2:** Cable is to be made to connect the DAS from Host-Box of the STS2 sensor. Refer for the pin-diagram page-22 of https://www.passcal.nmt.edu/webfm_send/488

ii. **CMG5T:** Pin diagram at page 22 of the https://www.guralp.com/documents/MAN-050-0001.pdf

iii. **Trillium 240:** Pin diagram at page 35 of the https://www.passcal.nmt.edu/webfm_send/220.

iv. **TSA100S:**

Pin	Name	Description	Input/Output
J	+12 V	+12 DC Power Supply	Input
H	-12 V	-12 DC Power Supply	Input
K	Power GND	Power Ground (Return); ground reference for sensor output signals	Input
U	Case GND	Connection to instrument case; this is isolated from Power GND	Input/Output
E	CAL	Calibration signal input; excites all three sensors simultaneously; requires CAL_EN line to be set to enable calibration; during normal recording, the CAL line should be tied to CAL_EN, or to Power GND.	Input
F	CAL_EN	Digital signal line to enable calibration input; a signal between +5 V and +12 V will enable calibration; during normal recording this line should be disconnected (floated) or tied to Power GND;	Input
L	X +	X+ Acceleration; one phase of differential output signal; for single-ended operation, this signal is referenced to Power GND	Output
M	X-	X- Acceleration; opposite phase of differential output signal	Output
N	X Shield	Connected to local GND for X-axis accelerometer; this can be connected to a shield within a user-defined cable[1]	Output
A	Y +	Y+ Acceleration; one phase of differential output signal; for single-ended operation, this signal is referenced to Power GND	Output
B	Y-	Y- Acceleration; opposite phase of differential output signal	Output
P	Y Shield	Connected to local GND for Y-axis accelerometer; this can be connected to a shield within a user-defined cable[1]	Output
C	Z +	Z+ Acceleration; one phase of differential output signal; for single-ended operation, this signal is referenced to Power GND	Output
D	Z-	Z- Acceleration; opposite phase of differential output signal	Output
R	Z Shield	Connected to local GND for Z-axis accelerometer; this can be connected to a shield within a user-defined cable[1]	Output
G	Power GND	Alternate connection to Power GND for user-defined cables	Output
S	Power GND	Alternate connection to Power GND for user-defined cables	Output
T	Power GND	Alternate connection to Power GND for user-defined cables	Output
V	Power GND	Alternate connection to Power GND for user-defined cables	Output

Table 1. Connections to the TSA-100S through the 19-socket circular connector.

[1]Within Metrozet's standard mating cable, the three shield outputs (pins N, P, and R) are connected to Power GND (Pin K).

v. **Reftek 151-120A:**

REF TEK

8 Pin-Out

The **151** connector is the PT02A14-19S. The standard **151** cable is the **130-8803** which is meant to connect the 151 to a 130-01. The connector pin locations are shown below:

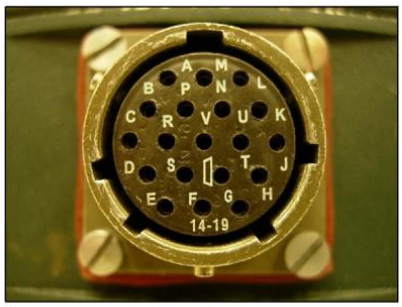

Figure 8-1 Connector Pin Out

The pin assignment of the 151 output connector is the following (it is pin-for-pin compatible with the 130-01 channel connector):

Pin	
A	Vertical positive signal output (+)
B	Vertical negative signal output (-)
C	N-S positive signal output (+)
D	N-S negative signal output (-)
E	E-W positive signal output (+)
F	E-W negative signal output (-)
G	Analog Signal Ground
H	Power Supply (+12V) input
J	Power Ground
K	No Connection
L	Calibration Enable (Active High) input
M	Center pin (Active Low) input
N	Calibration coil positive end
P	Vertical Mass position output
R	N-S Mass position output
S	E-W Mass position output
T	Calibration coil negative end
U	No connection
V	No connection

vi. **Reftek 131A:**

3.1 Sensor Connector

Sensor Faceplate Connector	Connector and Cable	Pin	Pin Desc	Electrical Desc	Voltage Range
Channels 1-3	PT07A1210S	A	CH+1	Output	±10 Volts
On All models		B	CH-1	Output	±10 Volts
Cable 130-8841	130 Recorder to sensor	C	CH+2	Output	±10 Volts
		D	CH-2	Output	±10 Volts
		E	CH+3	Output	±10 Volts
		F	CH-3	Output	±10 Volts
		G	Test +	Input	RS-485 differential
		H	Test -	Input	RS-485 differential
		J	+12V Input	Input	+10V to +16V DC
		K	GND		

Note: To activate the sensor test signal pull the Test + line (Pin G) higher than the Test - line (Pin H)

11. Price Bid Format at Annexure: Price Schedule has been modified and is as follows:

Sr. No.	Particulars	Qty	Make	Model	UNIT PRICE (INR)			Total price (INR)
					Base price	Applicable taxes	Total unit price	
A	B	C	D	E	F	G	H=F+G	I=HxC
1.	Six Channel Data Acquisition System (DAS) with storage memory card/ USB disk, GPS antenna and cable, power cable, Ethernet cable, electrical grounding cable etc. as per clause no.48, including & DAS firmware as per clause 50.1	50						
2.	Sensor cables (Clause no.48.1)	20						
	Sensor cables (Clause no.48.2)	20						
	Sensor cables (Clause no.48.3)	5						
	Sensor cables (Clause no.48.4)	25						
	Sensor cables (Clause no.48.5)	25						
	Sensor cables (Clause no.48.6)	5						
3.	Application software at three CRSs (Clause no.50.2)	3						
4.	Spares and accessories (Clause no.51)	1						
5.	Delivery at NCS Store and 3 CRSs at Delhi, Shillong and Hyderabad as per Clause no. 56	1						
6.	Training at Delhi (Clause no. 57)	1						
7.	Site Acceptance Test (Clause no.58)	1						
8.	Warranty (Two years) as per Clause 59)	1						
9.	**Total in INR**							

Technical and Financial bids must be prepared taking into consideration of above points.