बी एच ई एल **BHARAT HEAVY ELECTRICALS LIMITED**   **PHONES:23778474/**
CORPORATE RESEARCH & DEVELOPMENT DIVISION   **23776772 /23882204**
VIKASNAGAR, HYDERABAD - 500 093, INDIA   **FAX : 914023770698**

BHEL R&D Division wishes to procure an On-Line High Speed Data Acquisition, Storage, and Analysis Software for Thermal Analysis with the specifications given below.

Interested parties may contact any of the following officers of the purchase department for enrolment as vendors for this type of software before 16.30 hrs. of 14-10-2006. A limited tender enquiry will be floated to all the enrolled vendors on 15-10-2006.

Officers to be contacted:
1) H Krishnan, Addl. Gen. Manager
Email : hkrishnan@bhelrnd.co.in

2) A Madhu, Sr.Dy.Gen. Manager
Email : madhu@bhelrnd.co.in

3) NN Rao, Dy.Manager
Email : nnrao@bhelrnd.co.in

(A.Madhu)
SDGM(Purchase)

TECHNICAL SPECIFICATIONS
On-Line High Speed Data Acquisition, Storage, and Analysis Software for Thermal Analysis for Infrared Camera, Model ThermaCAM SC-3000 (FLIR make)

The minimum specifications (but not limited to) for the software are as follows :

1. The software shall be designed for professionals in R&D, scientist and all other infrared users for detailed real time analysis of thermal processes and dynamic events and **should be compatible with FLIR make, 2000 model SC3000 Camera.**

2. The software shall be Windows based, extremely versatile and easy to use and shall be compatible with our Infrared camera Model SC-3000 (FLIR make). The software shall be able to seamlessly store, retrieve and analysis of IR images and data directly from the Infrared Camera at 50 images per second (full frame). The certificate/letter from FLIR Systems towards compatibility and know how of the development of their camera interface protocol, required software algorithms is a mandatory requirement

3. It should have built in measurement and analysis functions including isotherms, spots measurement, line profiles, area histograms, image subtraction (frame by frame and also the complete clippings from the other selectable file stored earlier) etc. All analysis tools shall allow independent settings for emissivity and distances.

4. It should also set user defined recording conditions, sequence editing, comprehensive result tables. It shall be OLE compliant.

5. The software should give automatic temperature V/S time analysis for individual spot, area, line etc. It shall be possible to view live IR video and shall possible to control the camera from the software itself without going nearer to camera.

6. All associated hardware, if any required shall be incorporated to have a high speed data acquisition in real time.

7. The software shall also have the facility of automatic conversions of IR images to AVI, BMP or MatLab formats. Image storage on hard disk shall be fully radiometric 14 bit format for later playback and analysis.

8. The software shall show complete live / playback clipping of temperature distribution in 3-dimensional mode.

9. It shall be possible to export entire image to CSV format containing every pixel value within the image which can be imported to Excel or other programs.

10. Software shall automatically reduce / delete the desired frames from a sequence to reduce the file size.

11. It shall be possible to create and apply customs formulas and output of the formula shall be automatically logged in tabular format or in Excel.

12. The software shall be supplied with all associated hardware integrated in to a portable grade PC with following min. configuration :

    a. 15" colour TFT display
    b. 3.0 GHz or higher processor.
    c. 1 GB RAM
    d. 800 MHz System Bus
    e. 64 Bit graphics.
    f. 80 GB hard disk
    g. CD Read/Write (48X or better)
    h. 1.44 MB FDD
    i. IEEE-1394 FireWire interface
    j. PCMCIA card interface
    k. Other standard interfaces like USB 2.0, Parallel interface, RS-232 interface.
    l. Additional hardware integrated.
    m. All necessary cables (10 meters in length)

    Kindly provide web ID in order to view the profile and the product range offered by the company.