



**Tesla Engineering Limited**

Water Lane, Storrington, West Sussex, RH20 3EA, England

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E mail: sales@tesla.co.uk

Your reference : PANDA Superconducting Detector Solenoid

Our Reference : E4395/rmf

PANDA Collaboration

**Attention: Alexandre Vodopianov**

Friday, 30 March 2007.

Dear Mr. Vodopianov,

**Ref: PANDA Solenoid**

We thank you for the opportunity to quote for the above.

Tesla have previously offered a budget price estimate for the above of **€1.6million**. This budgetary quotation was inclusive of the following:

- a/ Engineering and manufacturing design.
- c/ Superconducting coil including materials, insulation, epoxy etc.
- d/ Cryostat with chimney and thermal shield, pumping port, quench detecting voltage taps, thermal sensors diodes and resistors.
- e/ Necessary one off tooling.
- f/ Coil manufacturing and assembly inside the cryostat.
- g/ Initial cool down and cryogenic testing without the iron yoke. We have allowed 5000 litres of helium for training the magnet at £2.30/litre. If more is required then this will be at the customers cost.
- i/ Assembly and tests at GSI with the return yoke.

In addition to the above, Tesla is now pleased to add the following budget price estimates:

- j/ The provision of suitable cryocoolers, turrets and associated equipment. Total price estimate of **€144,162**.
- k/ Design, manufacture and assembly of the eight piece laminated yoke to include the laminated downstream end cap, the solid upstream end cap and the support frame. Total price estimate of **€893,180**.  
This price is on the basis of a steel price of €1065 per 1000Kg.



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This will make our new total budget price estimate for the PANDA Solenoid to include point a/ to k/ as above of **€2.637m**.

Delivery will be about 24 months from placement of order,

The price is ex-works and subject to our standard terms and conditions of sale. This is a budget price estimate and will be subject to review upon receipt of a firm specification.

We look forward to hearing from you at your earliest convenience.

Yours sincerely,

A handwritten signature in black ink, appearing to read "R. Fellows".

Russell Fellows  
Estimator