



**ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH**

Laboratoire Européen pour la Physique des Particules
European Laboratory for Particle Physics

Group Code : AB-ATB

The Large Hadron Collider Project

IT-3308/AB/LHC

Invitation to Tender

Technical Questionnaire for LHC Collimators

(To be returned in duplicate by the Bidder.)

Firm:

Name:

Address:

.....

.....

The answers to this questionnaire shall be mailed to CERN together with the Tender Form concerning the Invitation to Tender IT-3308/AB/LHC.

Tenders sent without a completed questionnaire will be rejected.

1. GENERAL INFORMATION ABOUT THE FIRM OR CONSORTIUM

1.1 Contact Persons

Persons to be contacted for technical matters:

Name	Tel-Fax	Email
..... In case of absence:	Tel: Fax: Tel: Fax:

Persons to be contacted for commercial matters:

Name	Tel-Fax	Email
..... In case of absence:	Tel: Fax: Tel: Fax:

In addition to the technical details proposed by the Bidder, the Tender must contain the answers to the following questions.

If the space provided is insufficient, please reply on separate sheets.

2. SPECIFIC TECHNICAL QUESTIONS

2.1 Welding

2.1.1 EB welding: Describe in detail your welding equipment to be used for the production of the collimators?

.....

.....

.....

.....

.....

2.1.2 *What is the rate of production for the EB welding?*

.....
.....
.....
.....
.....
.....

2.1.3 *Do you have pulsed TIG welding equipment?*

.....
.....
.....
.....
.....

2.2 **Brazing**

2.2.1 *Describe in detail your brazing equipment to be used for the production of the collimators*

.....
.....
.....
.....
.....

2.2.2 *The overall length of the copper Glidcop joint to braze is 1060 mm. How do you handle these parts, and what is the production rate for this operation?*

.....
.....
.....
.....
.....

2.3 Machining

2.3.1 *In the event that graphite machining is required, do you intend to subcontract CFC machining. Please give the name and address of the potential sub-contractors.*

Name and address	Work to be sub-contracted
.....

2.3.2 *Do you see major difficulties to obtain the tolerances for the machining and the assembly?*

.....
.....
.....
.....
.....

2.4 Measurements

2.4.1 *Explain how you plan to check the flatness of the brazed cooling component and the fully assembled jaw unit.*

.....
.....
.....
.....

2.4.2 *The precision of the jaw position before closing the vacuum tank with the final weld is crucial. Do you have experience in calibrating sensors?*

.....
.....
.....
.....

2.5 UHV tests and bakeout

2.5.1 *The bakeout is a long procedure (see test description). How many bake out stations in parallel do you intend to use to comply to the delivery schedule?*

.....
.....
.....
.....
.....

3. GENERAL COMMENTS

If there are aspects not mentioned or not treated here with enough weight which you consider as being important, please express your opinion below.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Date

Signature and stamp of firm
(To be signed by each member in case of a consortium)