

Industry Oriented Solution/ Research Project Agreement based Proposal

between

SHAH MULTILAYER (P) LTD.

and

ABES Engineering College,
a unit of Society for Educational Excellence,
a society duly established under the laws of India,
having its registered office at 80, Navyug Market, Ghaziabad 201003

ABES Engineering College shall hereinafter be referred to as "ABESEC" and SHAH MULTILAYER (P) LTD. shall hereinafter be referred to as "COMPANY" and, collectively, as the "Parties".

1 SCOPE OF AGREEMENT

COMPANY and ABESEC shall work jointly to carry out the applied research project(s) in the agreed area for developing and providing solution(s) as stated below for the given scope of collaboration, or as may be stated in future proposals for future scope of collaborations, with specific objectives, terms & conditions to be jointly agreed under the Agreement.

2 SCOPE OF COLLABORATION

The parties agree to collaborate in the required consultancy solution as mentioned below on an applied research project basis:

"Fault diagnosis and assessment of casting defects in copper alloy fancy single taps (faucets) and mixers."

The scope of work is separately covered below.

This research project is undertaken by ABESEC as an academic institute to support the industry at a very nominal cost, and the COMPANY has extended the challenge to institute in the spirit of supporting academic institutes come forward and participate in industrial challenges.

3 ACTIVITIES AND OBLIGATIONS OF COMPANY

- 3.1. COMPANY shall be responsible for required parts/site access support for the project.
- 3.2. COMPANY will provide company know-how, which may be deemed necessary for the project.
- 3.3. COMPANY shall take reasonable steps to prevent ABESEC know-how, which are meant only for the purpose of conducting the Research Projects, from unauthorised usage or falling into unauthorised hands.

4 ACTIVITIES AND OBLIGATIONS OF ABESEC

- 4.1. ABESEC shall strive to complete the activities in the project and deliver the solution to COMPANY as per the project objectives and schedules.

Shah Multilayer Pvt. Ltd
Director

Prof. Gajendra Singh
Director
ABES Engineering College
Ghaziabad

4.2. ABESEC shall take reasonable steps to prevent COMPANY know-how, which are meant only for the purpose of conducting the Research Project(s), from unauthorised usage or falling into unauthorised hands.

5 FINANCIAL AND OTHER ARRANGEMENTS

The company will pay a consideration to ABESEC as detailed in annexure 2.

6 ASSIGNMENT

The Parties hereto shall not transfer or assign any of their rights and obligations under this Agreement to any other party without obtaining prior consent in writing from other Parties hereto.

7 TERM / DURATION

This Agreement shall be valid for the period of completion of the project as mentioned under clause 2 above (Scope of Collaboration)

8 TERMINATION

Any of the Party/Parties may terminate this Agreement by serving a written notice on the other Party/Parties one month prior to the intended date of termination.

9 NOTICES

All communications by COMPANY/ABESEC involving financial, administrative and other matters shall be sent to SPOC at ABESEC/COMPANY respectively. All information of technical nature may be exchanged directly between the Project Coordinator from ABESEC and appropriate COMPANY personnel as identified in writing, for the Project concerned.

10 INTELLECTUAL PROPERTY AND COMMERCIAL RIGHTS

10.1. Title to all inventions, discoveries or developments or other intellectual property including but not limited to copyrights, patents and industrial designs made solely by ABESEC inventors resulting from the project shall reside in ABESEC.

10.2. COMPANY will be given the right to commercially exploit the solution for their internal consumption.

10.3. ABESEC will retain all the rights, whatsoever, on the solution.

11 CONFIDENTIALITY

In addition to conditions maintained under clause 4 above the company will not indulge in divulging any details, what so ever, related to the project under the aegis of this agreement to any third party on it's own under any circumstances.

12 ARBITRATION, APPLICABLE LAW AND JURISDICTION

12.1. Any disputes between the parties shall be resolved by mutual discussions. Unresolved disputes, if any, shall be subject to resolution by a panel formed by the signing authorities to this agreement from either side or personal nominated by them in writing, for the project concerned. If the dispute cannot be resolved by the said panel, the matter shall be resolved by arbitration in accordance with the Arbitration and Conciliation Act, 1996. The venue of arbitration shall be Ghaziabad, Uttar Pradesh. The decision of the arbitrator shall be binding on both parties

For Shah Muttleyar Pvt. Ltd.

Director

Prof. Gajendra Singh
Director
ABES Engineering College
Ghaziabad

12.2. This agreement shall be governed by the Laws of India and subject to the jurisdiction of Courts in Ghaziabad, Uttar Pradesh.

13 GENERAL

- 13.1. Any addition, deletion and / or alteration to this Agreement may be effected with a written agreement of all the Parties to this Agreement concerning the amendments. A document containing the additions, deletions and/or alterations, and signed by all Parties hereto, shall form an annexure to and be deemed to be a part of this Agreement.
- 13.2. The headings of various clauses herein are inserted for convenience of reference and are not deemed to affect the meaning or construction of relative provisions.
- 13.3. ABESEC will have the right to continue to utilize the intellectual property generated as part of the R&D work carried out under this project for its commercial, research and for teaching purposes.
- 13.4. This Agreement and its Appendices constitute the entire agreement among the Parties' and supersede all other representations, understandings or communication whether written or verbal, with respect to the subject matter hereof.
- 13.5. The obligation under this agreement on ABESEC is limited to the commercial value of the research project as mentioned in Annexure 2 (Pricing).
- 13.6. The scope of work under this agreement will be based on the Annexure 1 (Scope of Work).

14 FORCE MAJEURE

Neither party shall be held responsible for non-fulfillment of their respective obligations under this Agreement due to the exigency of one or more of the force majeure events such as but not limited to acts of God, War, Flood, Earthquakes, Strikes not confined to the premises of the party, Lockouts beyond the control of the party claiming force majeure, Epidemics, Riots, Civil Commotions etc. provided on the occurrence and cessation of any such event the party affected thereby shall give a notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the parties shall jointly decide about the future course of action.

IN WITNESS WHEREOF, the Parties hereto have set and subscribed their respect; hands and seal on the day, month and year first herein above mentioned.

This Agreement has been signed by the Parties in two (2) identical copies, of which each Party has taken one.

Date and date

Place and date

ABES Engineering College

By

Name

Title

S.N. Sharma

Director

By

Name

Title

Prof. Gajendra Singh
Director

ABES Engineering College
Ghaziabad

For Shah Mukhija Pvt. Ltd.
Director

Annexure 1 Scope of Work(SOW):

Fault diagnosis and assessment of casting defects in copper alloy fancy single taps(faucets) and Mixers

Objective

To reduce the rejections in copper alloy fancy single taps(faucets) and mixers and finding root causes of occurrence of defects in the rejection of casting and taking necessary steps to reduce the defects by 3% to 6 % %, by bringing improvements in casting process.

Scope of Work

The castings used in plumbing works have to meet high standards in respect of strength under hydraulic pressure, and absence of defects caused by shrinkage and gas inclusions. The rejections are due to mainly account of leakage, shrinkage, porosity, and cracks, blow holes, pin holes etc. defects in gravity die castings.

The reduction in casting defects can be achieved by conducting a series of scientific-research and organisational--technical activities in a planned manner in the casting processes. Thus, practical data and results of scientific studies will be used to determine the effect of individual technological and metallurgical factors on the quality of brass castings with particular reference to shrinkage porosity and leakage.

The scope of work shall include the following:

- To make a detailed drawing or flowchart of the process to manufacture the product and look at all variables that controls the process (temperature, humidity, brass stock, etc).
- Design of experiments technique will be utilized to understand what variables control the process, the degree of control each variable has, and any interactions between the variables that may generate unexpected results.
- The chemical compositions along with the elemental analysis of scrap brass as well as honey brass used during casting operations will be thoroughly studied
- Elemental analysis of molten brass alloy at different intervals will be conducted to measure the process variables in different batches of production
- If some impurities are detected in the raw materials being used for casting then a solution for mitigation of impurities present in brass raw materials will be provided.

For Shah Munayer Pvt. Ltd.
Director

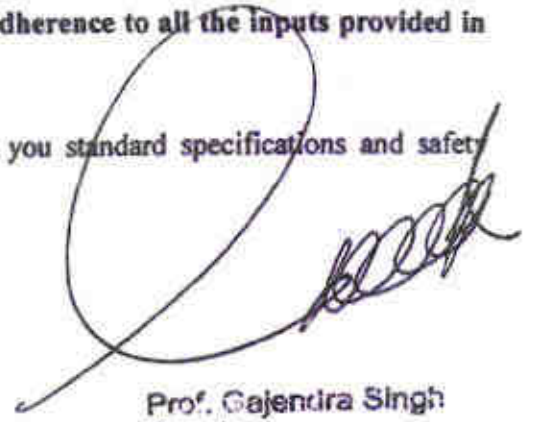
Prof. Gajendra Singh
Director
ABES Engineering College
Ghaziabad

- The various metallurgical and physio-mechanical processes involved during the casting operation will be studied and an optimum solution will be applied to minimise the casting defects.
- All the operating safety and preventive health measures and precautionary action taken during casting operations will be provided along with the solution to the rejection problem.

Note: The reduction in wastage is subject to adherence to all the inputs provided in the final research report.

As an additional input from our side we will suggest you standard specifications and safety measures for dies utilisation.

For Shah Multilayer
Director



Prof. Gajendra Singh
Director
ABES Engineering College
Ghaziabad

Annexure 2 Pricing:

Pricing Structure

A consolidated amount of Rs. 1,10,000/- shall be charged for the applied research project.

Terms and conditions

- Payment shall be made 50% in advance and 50% after submission of research outcomes.
- All applicable taxes and other government initiated instruments, if any, will be charged extra as on date of payment being made.
- Any change in scope of work of project shall change the terms and conditions as per the new implications and will not be covered under the scope of current project under any circumstances.