



Sakar Pan Mixer

User should check the currency of the Certificate by contacting Member Secretary, BMBA at BMTPC or the Holder of this Certificate.

Name and Address of Certificate Holder:

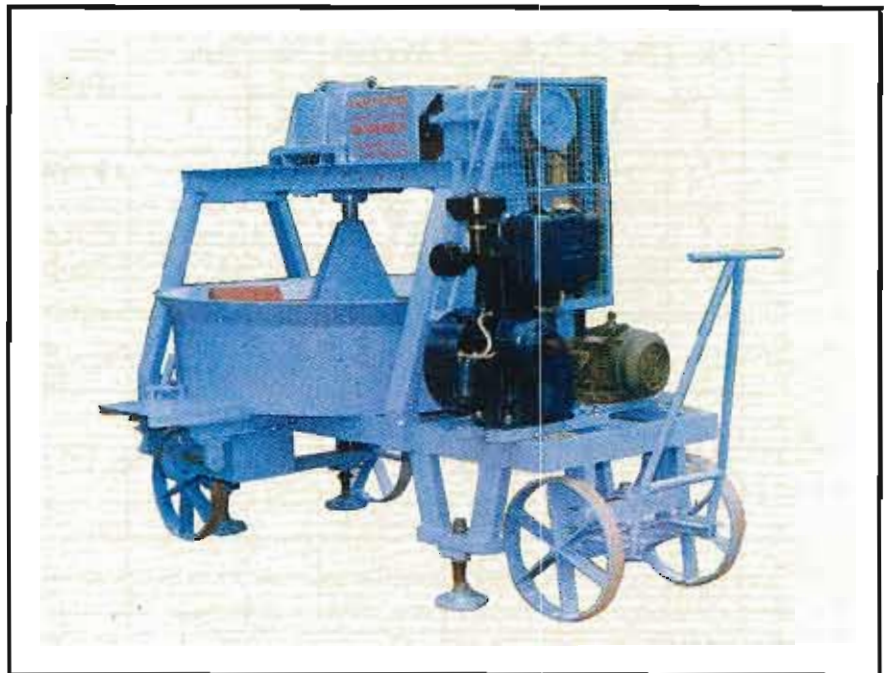
Susanji Udyog Private Limited,
No. 203/2&3, I.D.A,
Phase-II, Cherlapally
Hyderabad – 500 051

Performance Appraisal Certificate No.

PAC No. **4 / 2003**

Issue No. **1**

Date of Issue: **04.07.2003**



bmtpc

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Ministry of Urban Development & Poverty Alleviation
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Performance Appraisal Certificate

for

Sakar Pan Mixer

issued to

Susanji Udyog Private Limited
No. 203/2&3, I. D. A., Phase-II, Cherlapally,
Hyderabad-500 051

STATUS OF PAC 4 / 2003

s. No.	Issue No.	Date of Issue	Date of renewal	Amendment		Valid upto (Date)	Remarks	Signature of authorized signatory
				No.	Date			
1	2	3	4	5	6	7	8	9
1	1	04.07.03	-	-	-	03.07.06	-	<i>Perfor</i> 4.7.03
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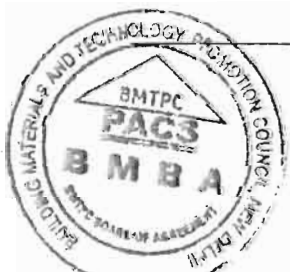


PAC No. 4 / 2003

Issue No 1

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PART-I CERTIFICATION

I-1 Certificate holder

Susanji Udyog Private Limited
No. 203/2&3, I. D. A., Phase-II, Cherlapally,
Hyderabad-500 051
Ph: 726 1081, 713 4182
E-mail: susanji@hd2.vsnl.net.in, susanji@rediffmail.com

I-2 Description of product

I-2.1 Name of the product- Pan Mixer

I-2.1.1 Brand name- Sakar

I-2.2 Brief description – Electrical motor or diesel engine operated mixer consisting of a pan, rollers and scraping blades and the required components for running the machine used for mixing of a mix of raw materials for mortar for masonry, plaster etc. and for making blocks (see also I-3.1i) (see Fig. 1 Sketch of Sakar Pan Mixer showing components).

I-3 Assessment

I-3.1 Scope of assessment

- i. Performance of the machine for mixing fine material such as flyash, lime, marble slurry, stabilised mud for manufacture of bricks, blocks. Mixing of mortar for jointing and plastering.
- ii. Capability of the client to manufacture the product based on manufacturing facility and quality control in the factory.

I-3.2 Assessment summary

I-3.2.1 The assessment was done through

- i. Inspection of the factory.
- ii. Inspection of test equipment at the factory.
- iii. Checking the working of machine by producing a sample mix.
- iv. Inspection of the machines already installed.

I-3.2.1.1 The assessment included verification of raw materials/components through certificates from suppliers, quality system certificates of the suppliers and visual inspection of materials, components and fully assembled machines. A sample mix of 1:4 cement-sand mortar was made in the factory. The inspection and test results were satisfactory.



I-3.2.2 Manufacturing and test facilities - Manufacturing and test facilities available in the factory were found to be suitable and adequate to produce the machines as per manufacturer's specification SUPL/Spec (SPM)/2-2002 Sakar Pan Mixer-Specification*

I-3.2.3 Experience in actual use – An installed and in-use machine was inspected. It showed no distress and was found to be functioning satisfactorily. The users had no complaints and reported that the machine was functioning satisfactorily. A batch of cement mortar was mixed at site during inspection and was found satisfactory.

I-3.2.4 Quality Assurance Procedure – The firm maintains a proper quality control system.

I-3.3 Customer Feedback

Firm gets written feedback from the customers. Certificates from some customer companies have been submitted by the firm and were seen by the inspecting team. These expressed satisfaction at the performance of the machine.

I-3.3.3.1 As per information provided by the PAC holder the oldest machine was supplied in October 1997. The user has reported that the machine continues to function satisfactorily.

I-3.4 Comments on claims made by certificate holder

Manufacturer claims that the material mix can be mixed uniformly, that typical cycle time is 5 minutes from charging to discharge and mix quantities upto 200 kg can be mixed. These claims stand verified from factory trial mix done during inspection. Uniformity of mixing was tested by pouring redoxide, 1% by volume of raw mix, at a point on the raw mix already poured in the pan and then running the mixer. The uniformity of colour in the final mix indicated uniformity of final mix obtained.

I-4 Uses of the product and limitations

I-4.1 Its use: For mixing fine aggregates of size 6mm and down (i.e. stone chips, powder, fly ash, lime, gypsum, sandy soil, sand, cement etc.) for making blocks / bricks, for mortar for construction, plastering; for mixing soil and flyash for stabilised soil work.

I-4.2 Limitations in Use

Machine can be used for mixes containing particle sizes of 6 mm and less only. The maximum weight of mix which the mixer can process at a time is 200 kg. It cannot be used for mixing concrete.

* Copy can be had from the PAC holder



I-5 Terms of Certification

I-5.1 Quality Assurance

I-5.1.1 The Certificate Holder implements and maintains a quality assurance system in accordance with Scheme of Quality Assurance (SQA).

I-5.2 Handling of user complaint

I-5.2.1 This Certificate holder shall provide quick redressal to consumer / user complaints proved reasonable and genuine.

I-5.2.2 The Certificate Holder implements the procedure included in the SQA for management of user complaints. As part of PACS Certification he shall maintain data on such complaints with a view to assess the complainant's satisfaction and the suitable preventive measures taken.

I-6 Certification

I-6.1 On the basis of assessment given in Part III of this certificate and subject to the conditions of Certification, use and limitations set out in this Certificate and if selected, installed and maintained as set out in Part I and Part II of this Certificate, in the opinion of BMBA the Pan Mixer covered by this Certificate is fit for use set out in the Scope of Assessment.

PART-II CERTIFICATE HOLDER'S TECHNICAL SPECIFICATION

II-1 Specifications for the machine

II-1.1 The PAC holder manufactures the machine in accordance with his technical specification SUPL/Spec (SPM)/2-2002 Pan Mixer Specification, a copy of which can be had from the holder of this PAC.

II-1.1.1 A sketch of the machine indicating the components is given in Fig. 1.

II-1.1.2 The construction details are given in the specification listed in II-1.1.

II-1.1.2.1 The drive system incorporates V belt drive and the speed reduction gears are mounted in gear boxes and are kept immersed in oil

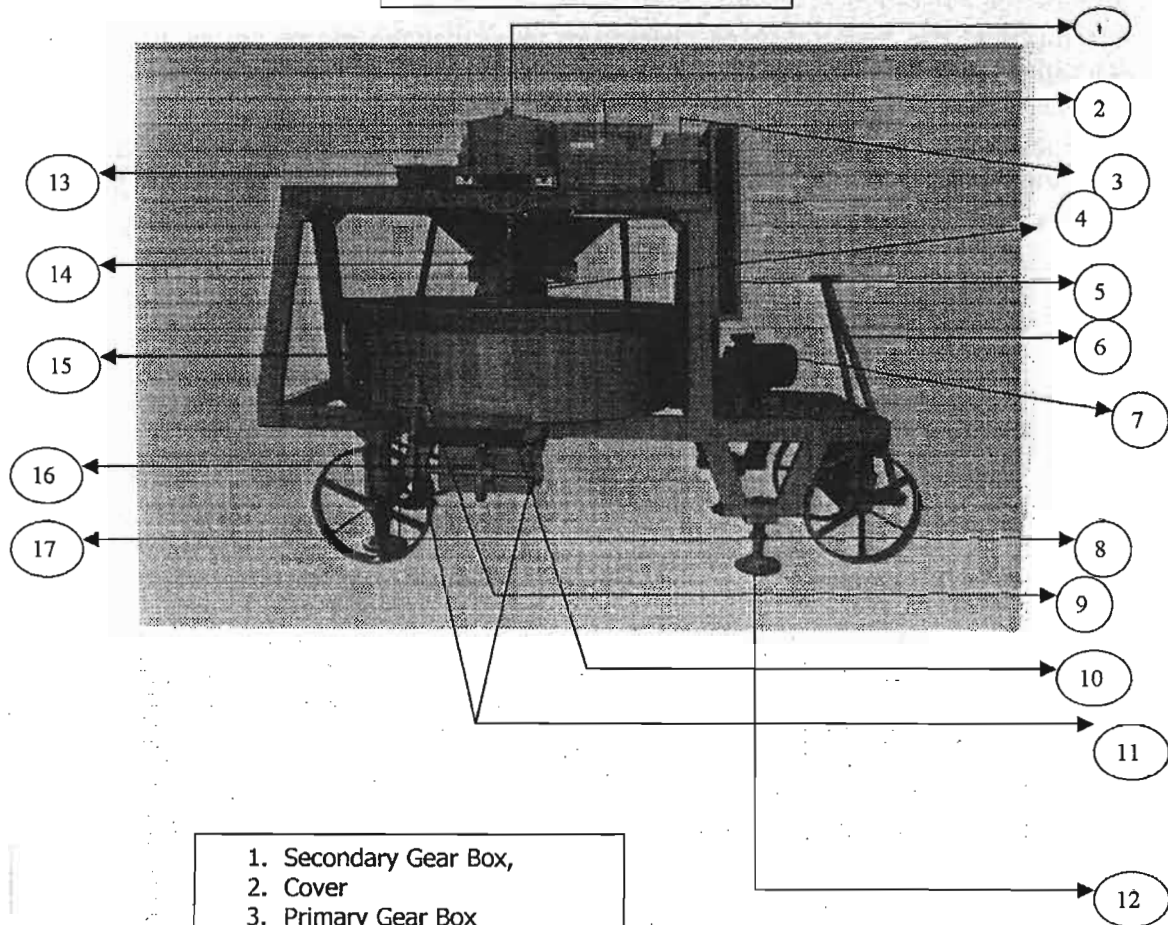
II-2 Installation including drawings

The Pan Mixer is erected on a platform of dimensions 3.2 m length x 1.5 m width x 0.6 m height and is leveled with help of jack's provided with the machine.

Once the mixer is leveled motor or diesel engine is fixed on the frame. The required V belts which are supplied along with machine are fixed to motor pulley. The Mixer is ready for operation. Manufacturer provides installation drawing to the customer.



"SAKAR" PAN MIXER



- 1. Secondary Gear Box,
- 2. Cover
- 3. Primary Gear Box
- 4. Rollers
- 5. Belt Guard
- 6. Towing Bar
- 7. Motor
- 8. Lock Handle
- 9. Chute Handle
- 10. Chute Cover
- 11. Housing
- 12. Jack
- 13. Hopper
- 14. Canopy
- 15. Pan
- 16. Chute Gear
- 17. Wheel

Figure 1



II-3 Maintenance Requirements

II-3.1 PAC Holder provides 1 or 2 days training to the user for operation and maintenance of machine which includes preventive maintenance to be carried out for trouble free operation of machine.

The machine has been designed keeping in view that the spares are available from market.

Routine Maintenance of machinery is to be carried out by the user. However if any user is not able to detect the solution for a problem with the machine, PAC holder deposes his representative who attends the complaint from user on a mutually agreed basis.

II-3.2 The PAC holder provides the following with the machine:

- i. Instructions for installation of the machine at site and installation drawing
- ii. Instructions for lubrication, periodical cleaning requirements and preventive maintenance
- iii. A catalogue of replaceable parts available in the market indicating the type, grade and designation of the part as indicated by different manufacturers of the part
- iv. A tool box containing tools required for installation, operation and maintenance of the machine
- v. Guarantee card

Each machine carries the PAC holder's serial number.

II-4 Special skill/training needed

II-4.1 No special skills or training are required in installing and operating the machine. However, if desired by the customer, the PAC holder provides 1 or 2 days of training (see II-3.1) on a mutually agreed basis.

PART-III BASIS OF ASSESSMENT AND BRIEF DESCRIPTION OF ASSESSMENT PROCEDURE

III-1 Basis of Assessment

III-1.1 The standards listed in PART-V were taken into account.

III-1.2 The assessment is based on the following:

- i. Inspection of the factory
- ii. Inspection of the manufacturing process, quality control and testing facility.



- iii. Inspection of machine in working condition during factory inspection and making a sample mix.
- iv. Inspection of the machine at a place of installation and use.
- v. Feedback of the customers who have purchased the machine.

III-2 Manufacturing process

III-2.1 The manufacturing process is shown in the flow chart in Annex VI-1.

III-2.2 As a part of the manufacturing process, in process inspections are carried out at Inspection Points (IP 1 to IP 9) shown in the flow chart at Annex VI-1.

III-3 Factory inspection

III-3.1 Machines in operation during inspection

Following machines were in operation at the time of factory inspection:

- i. Sheet Shearing Machine
- ii. Arc Welding Machine
- iii. Band Saw Machine
- iv. Milling Machine
- v. Drilling Machine
- vi. Gen Set
- vii. Angle Grinding Machines
- viii. Welding Machines
- ix. Band Saw Machine
- x. Hand Drill Machine
- xi. Radial Drilling Machine

Machines were found to be adequate to manufacture Pan Mixer.

The machines were properly maintained.

III-3.2 Inspection and measurements

During manufacturing only visual inspection is carried out for raw materials and their dimensional accuracy is ascertained by measurements. Finished components are checked for their dimensional accuracy with templates which have been made for each finished component. Templates were checked and were found in order.

III-3.3 Testing of Final Assembly

III-3.3.1 The fully assembled machine is tested by the manufacturer for its performance by test run for trial mixes and uniformity of mix is checked. In case there is any electrical or mechanical defect, it is rectified and finally the machine is painted.



III-3.3.2 During inspection, following checks were made at the time of test run.

- i. Energy consumption in use per unit volume or weight of mix output.
- ii. Uniformity of mixing
- iii. Capacity in terms of maximum weight of mix namely 200 kg
- iv. Charging time
- v. Mixing time
- vi. Discharge time

These were found satisfactory.

III-4 Inspection of installed machines

Machine installed at the following location in Hyderabad was inspected during the factory visit. Machine was found to be in satisfactory condition. The user had no complaints regarding operation or maintenance of the machine.

S. No.	Name of the user	Location where machine is installed	In use since	Remarks on maintenance	Remarks on condition of machine
1	2	4	5	6	7
1	Jan Priya Engineers Syndicate (India) Pvt. Ltd.	Hyderabad	May 2001	It was reported by the user that no special maintenance was required since installation.	Machine was in satisfactory condition and functional at the time of visit. Machine was used for mixing dry mortar for plaster at a site where 1200 LIG flats were under construction (see note)

Note: Director (Technical) of Jan Priya Engineers Syndicate Pvt. Ltd. expressed the following views regarding his experience in using the pan mixer:


- i. Obtained better quality of mortar which in turn resulted in better finish
- ii. Saved time compared to manual mixing
- iii. 20 mixes were done in one hour which includes loading, mixing and unloading cycle



PART –IV STANDARD CONDITIONS

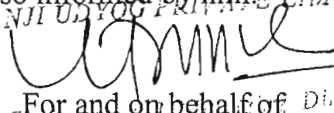
This certificate is issued subject to the following conditions:

- IV-1 The certificate holder continues to have the product reviewed by BMBA.
- IV-2 The product continues to be manufactured according to and in compliance with the manufacturing specifications and quality assurance measures which applied at the time of issue or revalidation of this certificate. The Scheme of Quality Assurance separately approved shall be followed.
- IV-3 The overall quality of the product should be maintained by the certificate holder.
- IV-4 The product user should install, use and maintain the product in accordance with the provisions in this Certificate and the recommendations of the manufacturer.
- IV-5 This certificate does not cover uses of the product outside the scope of this appraisal.
- IV-6 The product is appraised against performance provisions contained in the specification mentioned in II-1.1
- IV-7 Where reference is made in this Certificate to any Act of Parliament of India, Rules and Regulations made there under, statutes, specifications, codes of practice, standards etc. of the Bureau of Indian Standards or any other national standards body and the International Organization for Standardisation (ISO), manufacturer's company standards, instruction/manual etc., it shall be construed as reference to such publications in the form in which they were in force on the date of grant of this Certificate or its renewal/amendment.
- IV-8 The certificate holder agrees to inform BMBA of their distributors / licensees whenever appointed by him and agrees to provide to BMBA a six monthly updated list there of.
- IV-9 The certificate holder agrees to provide to BMBA feed back on the complaints received, the redressal provided, and the time taken to provide redressal on complaint to complaint basis as soon as redressal is provided. BMBA agrees to provide the certificate holder the user feed back received by it, if any.
- IV-10 If at any time during the validity period, PACH is unable to fulfill the conditions in this PAC, he should on his own initiative suspend using the PAC and notify Chairman, TAC the date from which he has suspended its use, the reason for suspension and the period by which he will be able to resume. He shall not resume without the prior permission of BMBA. He shall also inform, simultaneously, his agents, licensees, distributors, institutional, government, public sector buyers, other buyers and all those whom he has informed about his holding the PAC. He shall also inform all those who buy his product(s) during the period of suspension. He shall provide to BMBA at the earliest the list of who have been so informed by him


Chairman, TAC &
Member Secretary, BMBA
Bureau of Materials and Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
(Govt. of India)

T. N. GUPTA
Chairman, TAC
& Member Secretary, BMBA
Bureau of Materials and Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
(Govt. of India)

For SUSANJI UDYOG PRIVATE LIMITED


For and on behalf of Director,
Susanji Udyog Pvt. Ltd.
SUSANJI UDYOG PVT. LTD.

PAC No. 4 / 2003
B-1/1, Nirman Bhawan, New Delhi

203 / 2, IDA, Phase - II,
Cherlapally, Hyderabad--051.
Issue No 1
Phone : 7261081, 7261522



IV-11 In granting this Certificate, BMBA takes no position as to:

- (a) The presence or absence of patent or similar rights relating to the product;
- (b) The legal right of the Certificate holder to market, install or maintain the product;
- (c) The nature of individual installations of the product, including methods of workmanship.

IV-12 BMTPC and the Board of Agreement of BMTPC (BMBA) take no position relating to the holder of the Performance Appraisal Certificate (PACH) and the users of the Performance Appraisal Certificate (PAC) respecting the patent rights / copy rights asserted relating to the product / system / design / method of installation etc covered by this PAC. Considerations relating to patent / copy rights are beyond the scope of the Performance Appraisal Certification Scheme (PACS) under which this PAC has been issued.. PACH and users of this PAC are expressly advised that determination of the claim / validity of any such patent rights / copy rights and the risk of infringement of such rights are entirely the responsibility of PACH on the one hand and that of the users on the other.

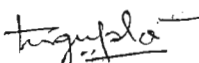
IV-13 It should be noted that any recommendations relating to the safe use of the product which are contained or referred to in this Certificate are the minimum standards required to be met with when the product is installed, used and maintained. They do not purport in any way to restate or cover all the requirements of related Acts such as the Factory Act, or of any other statutory or Common Law duties of care, or of any duty of care which exist at the date of this Certificate or in the future, nor is conformity with the provisions of this Certificate to be taken as satisfying the requirements of related Acts.

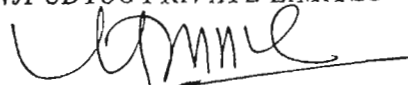
IV-14 In granting this Certificate, BMTPC and BMBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the use of this product.

IV-15 The certificate holder indemnifies BMBA, its officers and officials involved in this assessment against any consequences of actions taken in good faith including contents of this certificate. The responsibility fully rests with the certificate holder and user of the product.

IV-16 The responsibility for conformity to conditions specified in this PAC lies with the manufacturer who is granted this PAC. The Board (BMBA) will only consider requests for modification or withdrawal of the PAC.

IV-17 The PAC holder shall not use this certificate for legal defense in cases against him or for legal claims he may make from others. *For SUSANJI UDYOG PRIVATE LIMITED*


Chairman, TAC &
Member Secretary, BMBA
T. N. GUPTA
Chairman, TAC
& Member Secretary, BMBA
Building Materials and Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
(Govt. of India)
G.Wing, Nirman Bhawan, New Delhi


Chairman and Managing Director,
For and on behalf of
Susanji Udyog Pvt. Ltd.
SUSANJI UDYOG PVT. LTD.
203 / 2, IDA, Phase - II,
Cherlapally, Hyderabad--051.
Phone : 7261081, 7261522



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PART –V LIST OF DOCUMENTS USED IN ASSESSMENT

V-1 Indian Standards

V-1.1 IS:2438-1963 Specification for roller pan mixer

V-2 Specification of PACH

V-2.1 SUPL / Spec (SPM) / 2-2002 Sakar Pan Mixer (SPM) – Specification

CERTIFICATION

In the opinion of BMTPC Board of Agreement (BMBA) Sakar Pan Mixer bearing the mark 'Sakar' manufactured by Susanji Udyog Private Ltd., Hyderabad – 500 051 is satisfactory if used as set out above in the text of the Certificate. This Certificate **PAC No. 4 / 2003** is awarded to Susanji Udyog Private Ltd., Plot No. 203/2 & 3, IDA Phase-II, Cherlapally, Hyderabad – 500 051


The period of validity of this Certificate is as shown on Page 1 of this PAC
This Certificate consists of a cover page (not numbered) and pages 1 to 16.

On behalf of BMTPC Board of Agreement

New Delhi, India

Place

Date 4th July 2003



Chairman, Technical Assessment Committee (TAC) of
BMBA & Member Secretary, BMTPC Board of Agreement
(BMBA) under Ministry of Urban Development and
Poverty Alleviation, Government of India

P.N. GUPTA
Chairman, TAC
& Member Secretary, BMBA
Building Materials and Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
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G.Wing, Nirman Bhawan, New Delhi

PAC No. 4 / 2003

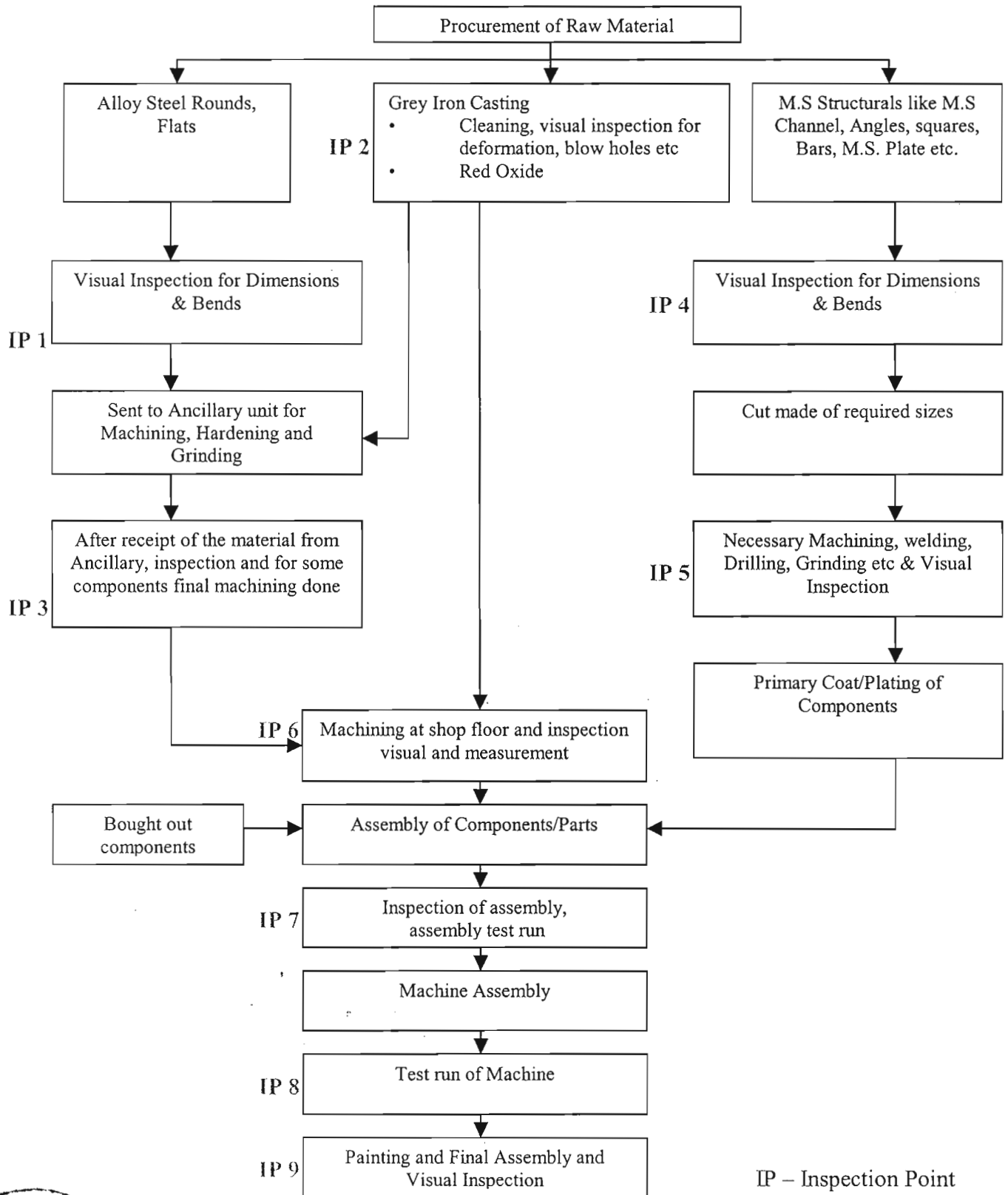
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PART – VI ANNEXES

Annex VI-1 (Para III-2.1, III-2.2)

MANUFACTURING PROCESS FLOWCHART FOR SAKAR PAN MIXER



IP – Inspection Point



Annex VI-2

Abbreviations

BMBA	-	BMTPC Board of Agreement
BMTPC	-	Building Materials and Technology Promotion Council
ED	-	Executive Director of BMTPC
IO	-	Inspecting Officer
LIG	-	Low Income Group
MS	-	Member Secretary of BMBA
PAC	-	Performance Appraisal Certificate
PACH	-	PAC Holder
PACS	-	Performance Appraisal Certification Scheme
TAC	-	Technical Assessment Committee (of BMBA)



Performance Appraisal Certification Scheme – A Brief

Building Materials & Technology Promotion Council (BMTPC) was set up by the Government of India as a body under the Ministry of Urban Development and Poverty Alleviation to serve as an apex body to provide inter-disciplinary platform to promote development and use of innovative building materials and technologies laying special emphasis on sustainable growth, environmental friendliness and protection, use of industrial, agricultural, mining and mineral wastes, cost saving, energy saving etc. without diminishing needs of safety, durability and comfort to the occupants of buildings using newly developed materials and technologies.

During the years government, public and private sector organisations independently or under the aegis of BMTPC have developed several new materials and technologies. With liberalization of the economy several such materials and technologies are being imported.

However, benefits of such developments have not been realised in full measure as understandably the ultimate users are reluctant to put them to full use for want of information and data to enable them to make informed choice.

In order to help the user in this regard and derive the envisaged social and economic benefits the Ministry of Urban Development and Poverty Alleviation has instituted a scheme called Performance Appraisal Certification Scheme (PACS) under which a Performance Appraisal Certificate (PAC) is issued covering new materials and technologies. PAC provides after due investigation, tests and assessments, amongst other things information to the user to make informed choice.

To make the PACS transparent and authentic it is administered through a Technical Assessment Committee (TAC) and the BMTPC Board of Agreement (BMBA) in which scientific, technological, academic, professional organisations and industry interests are represented.

The Government of India has vested the authority for the operation of the Scheme with BMTPC through Gazette Notification No. 1-16011/5/99 H-II in the Gazette of India No. 49 dated 4th December, 1999.

Builders and construction agencies in the Government, public and private sectors can help serve the economic, development and environmental causes for which the people and Government stand committed by giving preference to materials and technologies which have earned Performance Appraisal Certificates.

Further information on PACS can be obtained from the website: www.bmtpc.org



In case you have any suggestions/complaints write to;

Executive Director, BMTPC
and Member Secretary, BMTPC Board of Agreement,
(under the Ministry of Urban Development & Poverty Alleviation,
Government of India)
Core 5A, India Habitat Centre,
Lodhi Road,
New Delhi 110003

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