



Sakar Block Making Machine

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 **3 / 2003**

Issue No. **1**

Date of Issue: **04.07.2003**



bmtpc

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Ministry of Urban Development & Poverty Alleviation
Government of India
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Performance Appraisal Certificate

for

Sakar Block Making Machine

issued to

Susanji Udyog Private Limited
No. 203/2&3, I. D. A., Phase-II, Cherlapally,
Hyderabad-51

STATUS OF PAC 3 / 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
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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-51
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- Block Making Machine

I-2.1.1 Brand name- Sakar

I-2.2 Brief description – Electrically or diesel engine operated block making machine using vibration for compaction of mix placed in a mould on a top plate connected to the vibrator. The machine is fitted with a clutch to transmit the drive from the motor to the vibrator. The motor can be either three phase or single phase. The arrangement is such that the material in the mould can be compacted to a predetermined height of block (See Fig 1 Sketch of Sakar Block Making Machine).

I-2.2.1 Moulds for different shapes of blocks are supplied on specific order from the customer.

I-3 Assessment

I-3.1 Scope of assessment

- i. Performance of the machine for manufacture of different types of blocks namely solid blocks, bricks, hollow blocks, pavement blocks, blocks for arch foundation, interlocking blocks for walling, block for twin pit pour flush latrine, using mixes of raw materials such as cement, stone dust, sand, fly ash, marble slurry, sandy soil and other locally available material.
- 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 and production of block samples.
- 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 few samples of blocks were made in the factory and got tested in independent laboratory. 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 (SBMM)/1-2002 Sakar Block Making Machine – 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 machines were functioning satisfactorily. A few blocks of mix of 60% fly ash, 30% lime and 10% gypsum were cast at site; the blocks were 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 August 1990. The user has reported that the machine continues to function satisfactorily.

I-3.4 Comments on claims made by certificate holder

Manufacturer claims that Sakar Block Making Machine has a unique feature by which uniform height of blocks can be achieved with desired/designed compaction for a given mix. A few blocks were cast at the time of inspection in the factory; performance of the machine was found to be satisfactory with regard to compaction and uniformity of height of the compacted blocks.

I-4 Uses of the product and limitations

I-4.1 Its use: The machine can be used for making solid blocks using stone chips, sand and cement, and other types of blocks namely solid blocks, bricks, hollow blocks, pavement blocks, blocks for arch foundation, blocks for twin pit pour flush latrine, inter-locking blocks for walling using mixes of raw materials such as stone dust, sand, fly ash marble slurry, sandy soil, gypsum etc.

I-4.1.1 The user should first decide on the size of block, the type of block, the raw materials he proposes to use, the density, the crushing strength desired and then design the mix proportions and the moisture content at compaction. Thereafter, a

Copy can be had from the PAC holder

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suitable mould is to be made for moulding the blocks. The PAC holder can provide custom made moulds.

I-4.1.2 It is recommended that a proper mechanical mixer is used for ensuring uniformity of mixing of the raw materials.

I-4.2 Limitations in Use

I-4.2.1 Machine can manufacture different sizes of bricks/blocks subject to maximum length, width and height of 600 mm, 200mm and 400 mm, respectively.

I-4.2.2 Maximum weight of material that can be compacted at a time is 45 kg.

I-4.2.3 The machine cannot be used for making clay bricks.

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 block making machine covered by this Certificate is fit for use set out in the Scope of Assessment.

PART-II CERTIFICATE HOLDER'S TECHNICAL SPECIFICATION

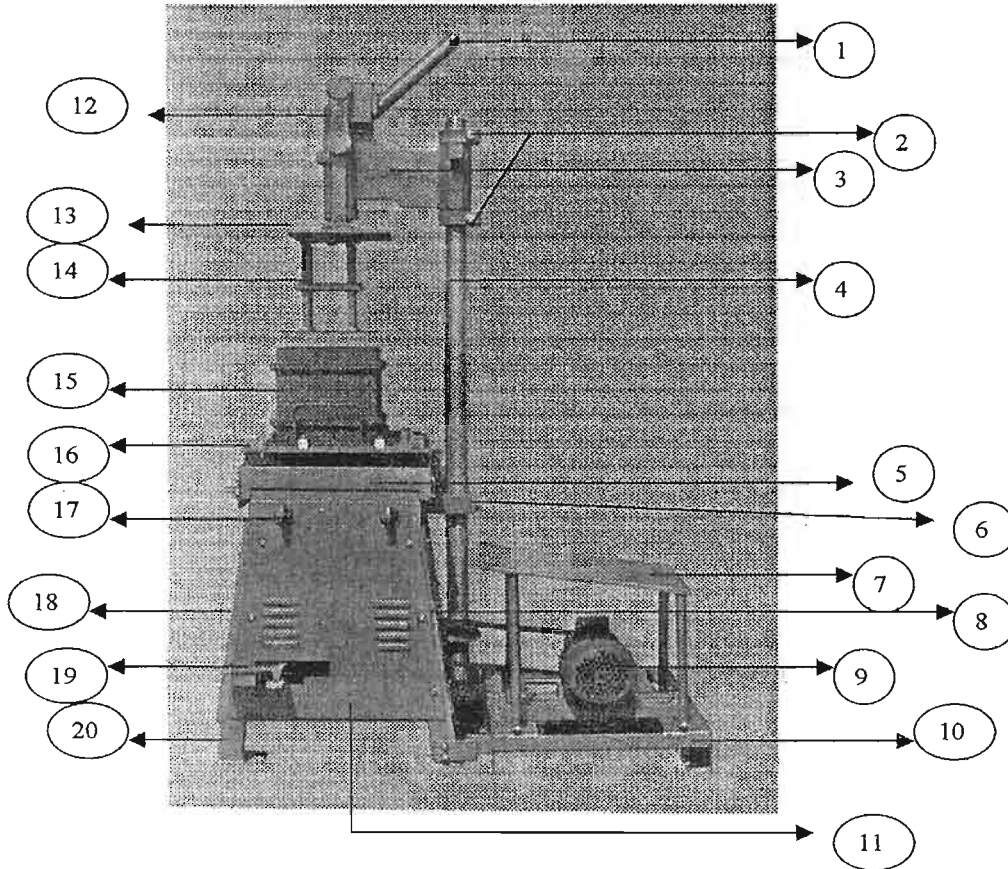
II-1 Specifications for the machine

II-1.1 The PAC holder manufactures the machine in accordance with his technical specification SUPL/Spec (SBMM)/1-2002 Sakar Block Making Machine Specification, a copy of which can be had from the holder.

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



“SAKAR” BLOCK MAKING MACHINE



- | | | | |
|----------------|--|------------------|---------------|
| 1. Handle | 2. Clamp | 3. Bracket | 4. Main Shaft |
| 5. Side Clamps | 6. Square Clamps | 7. Motor Cover | 8. Back Cover |
| 9. Motor | 10. Back Frame
(for fixing motor/diesel Engine) | 11. Side Cover | 12. Link |
| 13. D B Plate | 14. Press Plate | 15. Mould | 16. Top Plate |
| 17. Eye Bolts | 18. Front Cover | 19. Clutch Pedal | 20. Frame |

Figure 1

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

II-2 Installation including drawings

The machine can be fixed on a wooden log or with help of foundation bolts grouted in ground. The machine is to be installed on leveled surface.

The PAC holder provides the user of the machine a sketch of foundation and anchor details.

The motor is fixed on the motor frame which is fixed at the back of the machine. The machine is portable. It weighs 200kg without moulds and the motor and can be detached and transported separately.

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 deputed 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. Sketch of foundation drawing and anchoring details; instructions for installation of the machine
- 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-2 and 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 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 few sample blocks.
- iv. Inspection of the machine at a places 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 Block Making Machine.

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 manufacturing some blocks. In case, there is any electrical or mechanical defect, it is rectified and finally the machine is painted.

III-3.3.2 Some rectangular blocks and paver blocks were cast during inspection and were checked for dimensions and were found to be satisfactory. These blocks were got tested after required curing, in an independent laboratory. Some existing blocks were tested for compressive strength at their new premises and found to be satisfactory. The arrangement in the machine for achieving uniform height thereby obtaining desired density of block consistently at compaction moisture content for a designed mix was found satisfactory. Sakar Block Making Machine can be used to make different types/sizes of blocks by using appropriate moulds.

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	Green Bloc Industries	292, Nagaram, Cherlapally, Hyderabad	December 1996	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




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
Building Materials and Technology Promotion Council
Ministry of Urban Development & Poverty Alleviation
(Govt. of India)
G. Block, Nirman Bhawan, New Delhi


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

PAC No. 3 / 2003

Issue No 1 / 2, IDA, Phase - II,
Cherlapally, Hyderabad-051.
Phone ; 7261031, 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.

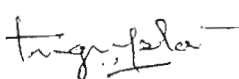
IV-13 It should be noted that any recommendations relating to the safe use of the product which are contained or referred to in this Certificate are the minimum standards required to be met with when the product is installed, used and maintained. They do not purport in any way to restate or cover all 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.



Chairman, TAC &

Member Secretary, BMBA 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

For SUSANJI UDYOG PRIVATE LIMITED


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 : 7261031, 7261522

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PART –V LIST OF DOCUMENTS USED IN ASSESSMENT

V-1 Company Standard of the PAC holder

V-1.1 SUPL/Spec(SBMM)/1-2002 Sakar Block Making Machine (SBMM) – specification

CERTIFICATION

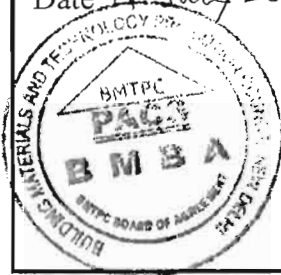
In the opinion of BMTPC Board of Agreement (BMBA) Sakar Block Making Machine bearing the mark 'Sakar', manufactured by Susanji Udyog Private Ltd., Hyderabad – 500 051 is satisfactory if used as set out above in the text of the Certificate. This Certificate **PAC No. 3 / 2003** is awarded to Susanji Udyog 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 17.

On behalf of BMTPC Board of Agreement

New Delhi, India
Place

Date *14 July 2003*



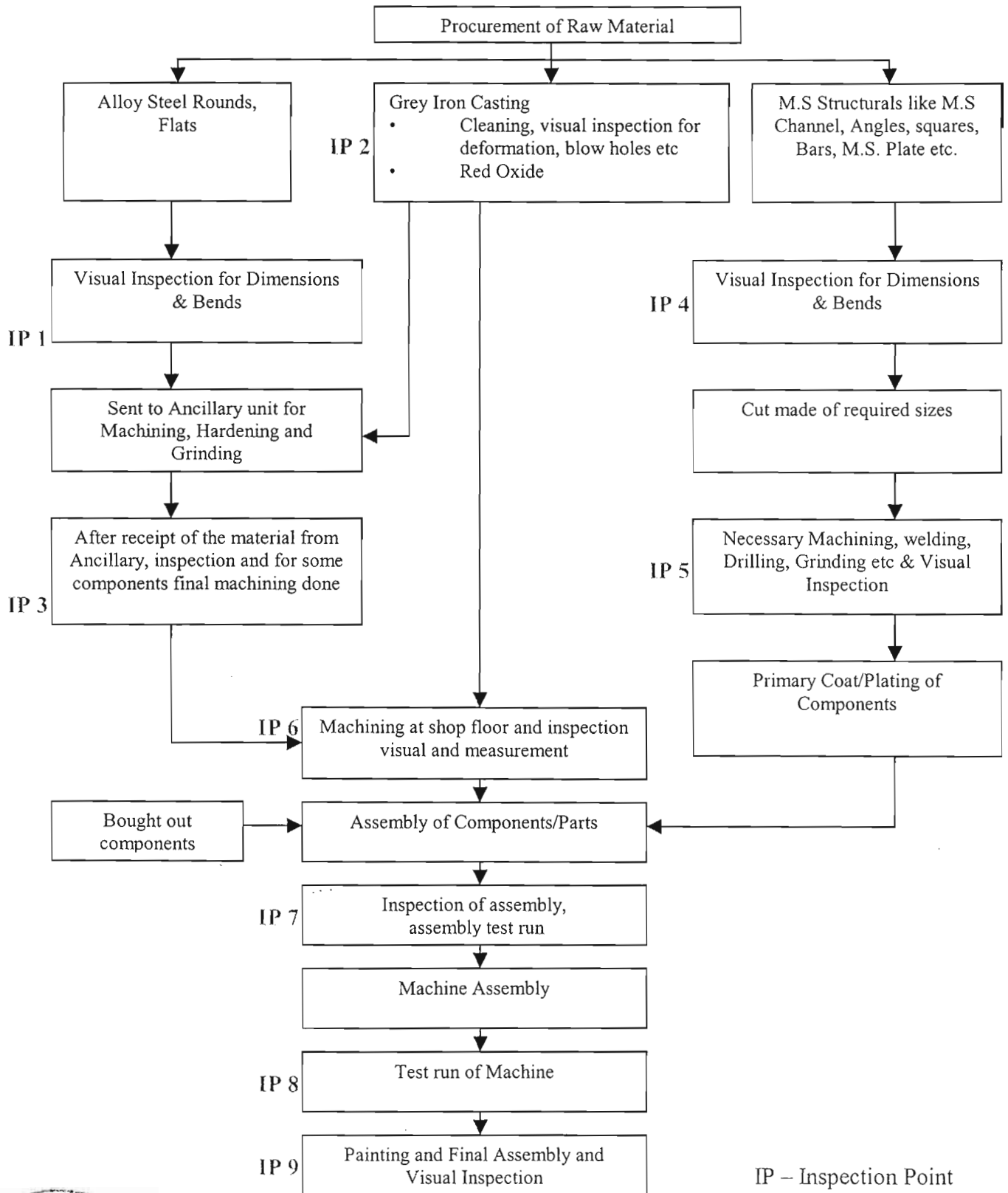
Chairman, Technical Assessment Committee (TAC) of
BMBA & Member Secretary, BMTPC Board of
Agreement (BMBA) under Ministry of Urban
Development and Poverty Alleviation, Government of
India

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, Naraina Bhawan, New Delhi

PART – VI ANNEXES

Annex VI-1 (Para III – 2.1, III-2.2)

MANUFACTURING PROCESS FLOWCHART FOR SAKAR BLOCK MAKING MACHINE



Annex VI-2

Abbreviations

BMBA	-	BMTPC Board of Agreement
BMTPC	-	Building Materials and Technology Promotion Council
ED	-	Executive Director of BMTPC
IO	-	Inspecting Officer
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,
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New Delhi 110003

E Mail : bmtpc@del2.vsnl.net.in

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