K. K. NAG PVT. LTD

CORPORATE PRESENTATION

OCT 2021

ABOUT US

Rich history of innovation and of pioneering new plastic processes in India

Over 60 EPS/EPP moulding machines with a capacity of 8,500 MT per annum

2 rotational moulding machines with a capacity of 1,475 MT per annum

NAGMAGIC®

Achieving Excellence with Plastics

OUR CORE VALUES

NAGMAGIC®

INTEGRITY

We are committed to doing the right thing the first time, every time; even when no one is looking

CUSTOMER FOCUS

Our customers always come first and we endeavour to unfailingly meet our commitments to them

INNOVATION

We apply our creativity, experience and ingenuity to constantly be the best at what we do

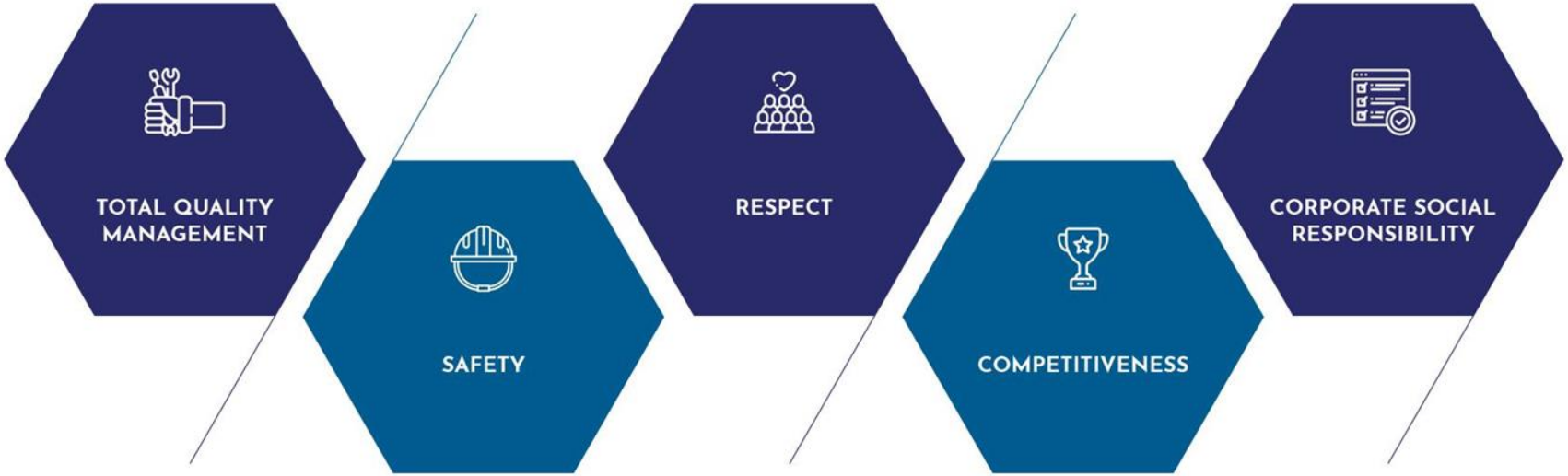
TEAMWORK

We work together to achieve our common goals for the success of both the individual and the company

EXCELLENCE

We focus on the continual improvement of our systems, processes and methods to achieve excellence

OUR GUIDING PRINCIPLES



OUR HISTORY

- Our association with EPS actually predates the company
- Prior to starting K. K. NAG PVT. LTD, Mr Kalyankumar Nag was a partner in R. A. Cole & Co.
- Expandable Polystyrene resin was first developed and patented in India by Mr R. A. Cole and Mr K. K. Nag
- The generic name for EPS in India is **THERMOCOLE (THERMO for Heat + COLE for Rudy Cole)!**

FIRST INDIAN PATENT FOR EPS - 1957

GOVERNMENT OF INDIA : THE PATENT OFFICE, 214, LOWER CIRCULAR ROAD, CALCUTTA-16.

Specification No. 59521, 31st January 1957. (Accepted 24th April 1957.)

AN IMPROVED METHOD OF MANUFACTURING ARTICLES OR BODIES OF CELLULAR STRUCTURE FROM THERMOPLASTIC SYNTHETIC RESIN OR RESINS.

RUDOLF ARTHUR COLE, A BRITISH NATIONAL AND KALYAN KUMAR NAG, AN INDIAN CITIZEN, BOTH OF APOLLO STREET, BOMBAY 1, BOMBAY STATE, INDIA.

The following specification particularly describes and ascertains the nature of this invention and the manner in which it is to be performed.

This invention relates to improved method of manufacturing articles or bodies of cellular structure from thermoplastic synthetic resin or resins.

The manufacture of cellular articles or bodies from thermoplastic synthetic resins is known to be carried out in such a manner that powdered polymers are intimately mixed with foaming agents that means materials which decompose with development of gas on heating. The mixture of thermoplastic synthetic resin and foaming agent is filled in airtight moulds and the moulds are heated to the point where the thermoplastic synthetic resin becomes a soft mass and the foaming agent decomposes and forms a gas which however remains compressed as the airtight moulds will not allow the gas within the mass to expand. The mass containing the foaming agent is then allowed to cool down in the mould to room temperature and the resulting solid mass is removed from the mould. The solid mass is thereafter reheated to the softening point of the synthetic resin when the entrapped and compressed gas of the foaming agent expands the mass. A known modification of this process provides that the softened mass of thermoplastic synthetic resin containing the gas in its compressed state is released out of the mould for instance through a nozzle or opening and then preferably into a vacuum when the mass will immediately expand. Examples of foaming agents used are ammoniumcarbonate and bicarbonate, Sodium-bicarbonate, Azo-compounds, hydrazine-compounds, hydrogen peroxide, methylchloride, propane and the like. With the wide range of available foaming agents other processes have become known differing in the method of incorporating the foaming agent in the mass and differing in the type of foaming agent used but not differing from the known method of expanding the mass containing the foaming agent which is as stated above, to heat that mass to or above the softening point of the thermo-plastic synthetic resins when the mass is expanded by the release of the compressed gas of the foaming agent. The methods of incorporating such varying foaming agents are known to cover amongst others the use of vacuum in order to better incorporate the foaming agent in the thermoplastic synthetic resins or as an example the use of monomers

bodies of uniform and controlled cellular structure from the granules of thermoplastic synthetic resin or resins containing a foaming agent.

The granules of thermoplastic synthetic resin or resins containing a foaming agent for use as starting material for this invention are prepared in any manner, for example by mixing the powdered polymers with foaming agent or agents, the mixture being then filled in airtight moulds which are heated to a point where the thermoplastic synthetic resin becomes a soft mass, the foaming agent decomposes and forms a gas, [illegible] airtight mould [illegible] The [illegible] mass containing [illegible] mould and [illegible] other to form [illegible] removed from the cooled mould, is a [illegible] form cellular structure having dimensions [illegible]

OUR JOURNEY

Founded in Pune in 1965 by the late Mr K. K. Nag and the late Mrs Surabhi Nag

Pioneered Fibreglass Reinforced Plastic (FRP) in India

Member of the initial cohort of Expanded Polystyrene (EPS) processors in India

First to introduce Expanded Polypropylene (EPP) in India

Embarked on the Total Quality Management (TQM) journey - introduced TQM at all locations for all departments

OUR LOCATIONS

4 EPS/EPP manufacturing locations

1 Rotational moulding plant

1 Tool room

2 Warehouses

DISTANCES BY ROAD

Pune plant – Urse/Rotational moulding plant
From nearest sea port (JNPT) – 108 km
From nearest international airport (Mumbai Airport) – 122km

Pune plant – Ranjangaon
From nearest sea port (JNPT) – 177 km
From nearest international airport (Mumbai Airport) – 190 km

Chennai plant
From nearest sea port (Chennai Port) – 49 km
From nearest international airport (Chennai Airport) – 44 km

Puducherry plant
From nearest sea port (Chennai Port) – 150 km
From nearest international airport (Chennai Airport) – 146 km

OUR PLANTS

Foam Moulding - Kariamanickkam (Puducherry)

Foam Moulding - Ranjangaon (Pune)

Foam Moulding - Thiruvallur (Chennai)

Foam Moulding - Urse (Pune)

Rotational Moulding - Urse (Pune)

PLASTICS PROCESSED

NAGMAGIC®

Polymer	Type	Supplier	Country
EPS	Standard EPS	Supreme Petrochem Ltd	India
EPS	FR	Supreme Petrochem Ltd	India
EPS	Antistatic	Supreme Petrochem Ltd	India
EPS	Graphite embedded	Sunpor Kunststoff GmbH	Austria
EPS	Peripor	BASF SE	Germany
EPO (PSPE)	Piocelan	Sekisui Kasei	Japan
EPE	Standard	JSP Foam Products	Singapore
EPE	Antistatic	JSP Foam Products	Singapore
EPP	Standard	JSP Foam Products	Japan
PE	LLDPE	Reliance Industries Ltd	India
PE	HDPE	SCG Performance Chemicals Co. Ltd	Thailand
PP	PP	PSD Rotoworks	Thailand

EXPANDED POLYSTYRENE (EPS)

EPS AT K. K. NAG PVT. LTD

NAGMAGIC®

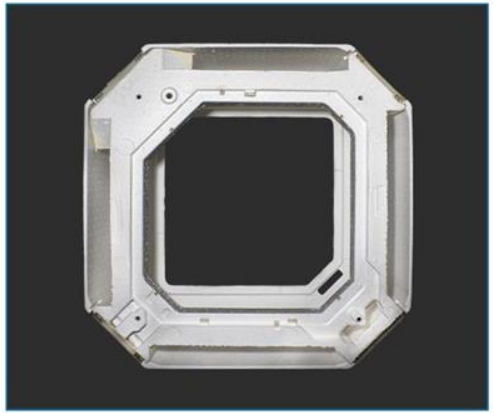
- We have 4 EPS processing plants in Urse and Ranjangaon (Pune), Thiruvallur (Chennai) and Kariamanickkam (Puducherry)
- We have 2 warehouses located in Anekal (Bangalore) and Yellamanyam (Tirupati)
- From concept to final product almost every activity is carried out in-house, including designing, prototyping, mould development and manufacturing of the EPS part
- We are reputed to be the most technically progressive EPS processor in India
- We are known to have the best quality EPS mouldings and tools in the country
- All our plants are certified for ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. Three of our four plants are certified for IATF 16949:2016
- We are amongst the largest EPS shape moulders in India
- We have EPS processing machines with platen sizes ranging from 400 X 600 mm to 1,300 X 1,700 mm

NAGMAGIC®

Packaging

NAGMAGIC®

Components



EPS FOR AGRICULTURE AND MARINE APPLICATIONS

NAGMAGIC®

EPS FOR PHARMACEUTICALS AND CHEMICALS

NAGMAGIC®

We are very proud to be playing a major role in the international Covid-19 response as one of the leading vaccines is packaged and transported world-wide in our EPS insulation boxes.

Medicine/Vaccine Packaging Box

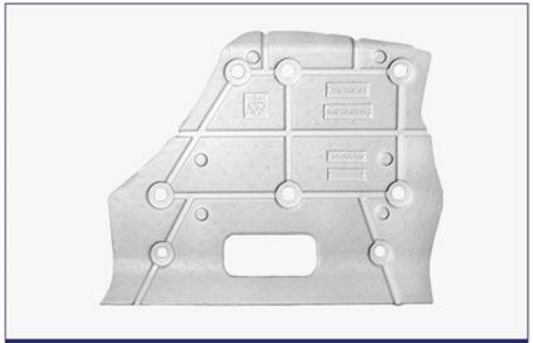
2.5 Litre Chemical Box

EPS FOR AUTOMOTIVE INDUSTRY

NAGMAGIC®

Seat Pad

Crash Pad



Crash Pad

Car Floor

SELECT EPS CUSTOMERS (OEMS AND TIER 1)

NAGMAGIC

autoneum

Carrier

Dixon

Godrej

Hindustan Unilever Limited

JABIL

KRISHNA

LG

NOKIA

Panasonic

RADIANT appliances & electronics

SUPREME TREON

SERUM INSTITUTE

Softbox TEMPERATURE CONTROL PACKAGING SYSTEMS

Whirlpool CORPORATION

YAMAHA

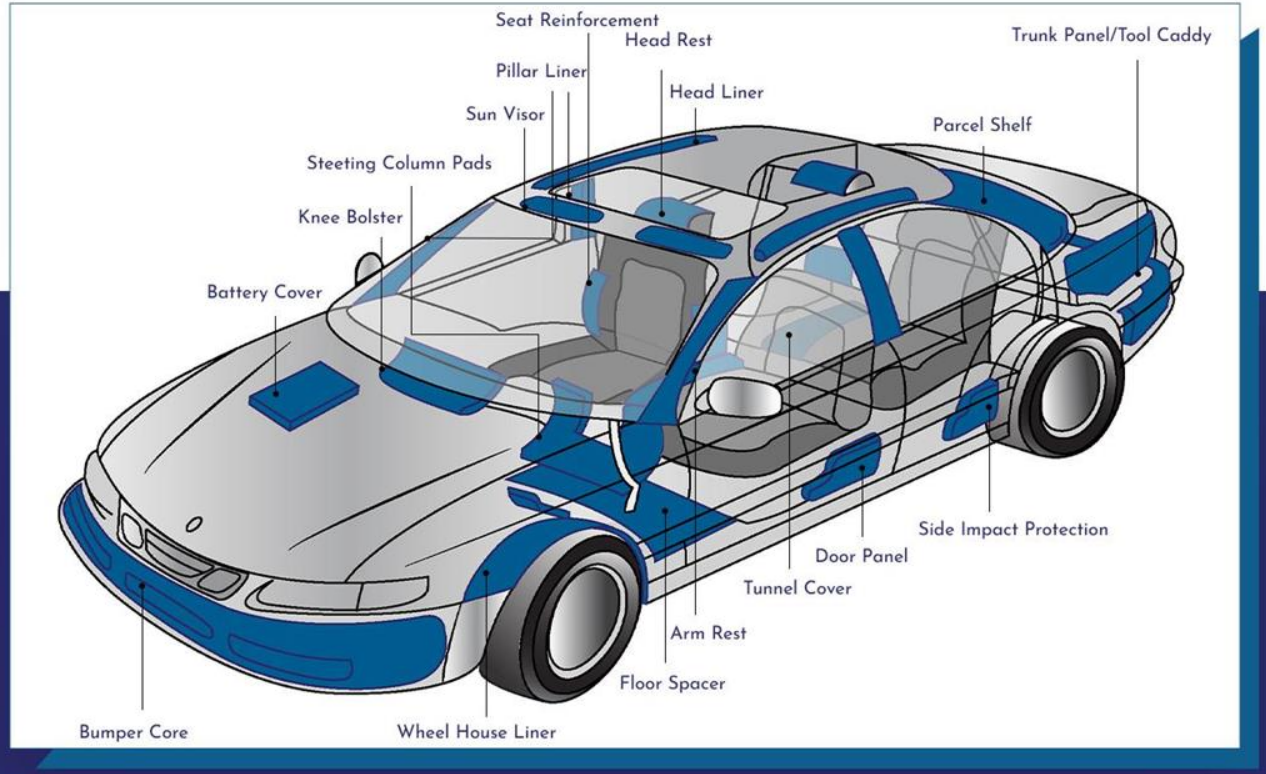
We proudly count almost all major manufacturers of consumer durables in Western and Southern India as our customers

EXPANDED POLYPROPYLENE (EPP)

EPP AT K. K. NAG PVT. LTD

- We have 1 EPP processing plant in Urse (Pune)
- We supply components such as seat cores, bumper cores, sun visors, impact modifier blocks, tool and jack trays, load floors, dashboard panel pads, fenders, helmets, etc., to automotive OEMs and Tier 1 and Tier 2 companies
- We cater to a variety of packaging and dunnage applications
- We provide various products for the defence sector
- We make boxes for the food and fishery industries
- We have EPP processing machines with platen sizes ranging from 600 X 800 mm to 1,300 X 1,700mm

AUTOMOTIVE APPLICATIONS OF EPP



EPP IN THE AUTOMOTIVE SECTOR

NAGMAGIC®

Seat Core

Seat Core with Wire-Frame Insert Moulding

NAGMAGIC®

Bumper Cores (Energy Absorbers)

EPP IN THE AUTOMOTIVE SECTOR

Sunvisor

Head Rest

Energy Absorber

NAGMAGIC®

Tool Kits

EPP IN THE AUTOMOTIVE SECTOR

Jack Mounting Tray

Fenders

Fenders

EPP IN THE DEFENCE SECTOR

NAGMAGIC®

Bomb Detector Packaging

Landmine Packaging

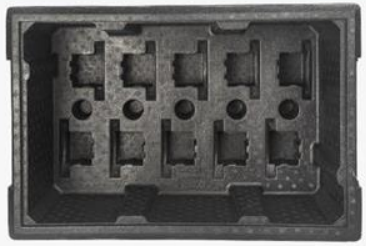
Hand Launcher Packaging

NAGMAGIC®

Considering its properties, EPP Foam can also be used as reusable packaging for heavy products by replacing wood and EPS

ADVANTAGES

- Increases product safety as it can withstand multiple shocks
- Increases packing efficiency
- Saves packaging cost per component
- Reduces weight
- Makes handling easier and reduces fatigue
- Good resistance to chemicals
- Environment friendly as no CFC gases



Fuel Injector Packaging

Camshaft Packaging

SELECT EPP CUSTOMERS

NAGMAGIC®

ANALOGIC® CONTROLS INDIA LTD.

Bajaj CARPETS The graceful spread

BHARAT FORGE | KALYANI

Ford

FIAT

GSF

GRUPO ANTOLIN

HONDA

LEAR CORPORATION

Motherson Sumi Systems Limited

Miltech

Mahindra

NISSAN

NOKIA

Pinnacle Industries Ltd.

SUPREME TREON

SIPL

TATA

TOYOTA

ROTOMOULDING

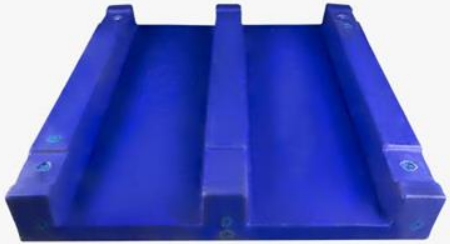
ROTOMOULDING AT K. K. NAG PVT. LTD

NAGMAGIC®

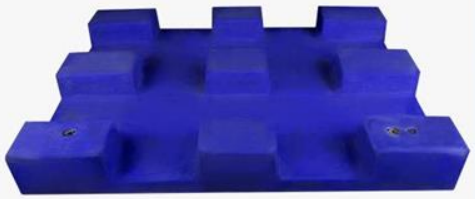
- We make custom moulded products for various sectors like Agriculture, Automotive, Chemicals, Consumer Durables, Exhibition, Food and Beverage, Marine, Material Handling and Solar Energy
- We manufacture several proprietary products, including an extensive range of sanitation products. These proprietary products are exported world-wide to international aid agencies such as UNICEF, MSF, ACF and IFRC
- We have our own brand of rotomoulded tanks, pallets, insulated tubs and floats
- We have two 4-arm rotational moulding machines with gas fired burners and swing diameters of 2,200 mm and 4,000 mm respectively
- Our total manufacturing capacity is approximately 350 MT per month
- We also have a facility for PU foaming with soft and hard foam, and a facility for EPS filling in rotationally moulded components

ROTOMOULDED PRODUCTS - PALLETS

Pallet Top



2 Way Pallet



4 Way Pallet with 9 Legs

Pallet Top

4 Way Pallet with Skids

60 Litre Insulated Box

100 Litre Insulated Box

Landmine Packaging Box

Rifle Launcher Packaging Box

ROTOMOULDED PRODUCTS - HEALTHCARE AND SANITATION

NAGMAGIC®

Squatting Slab

Squatting Slab with Sitting Toilet

Squatting Slab with Pan

Syringe Collection Container

ROTOMOULDED PRODUCTS - AUTOMOTIVE AND SOLAR ENERGY RELATED

NAGMAGIC®

Excavator Roof

Excavator Instrument Panel

Tractor Mounted Pesticide Tank

Solar Water Heater Tank

ROTOMOULDED PRODUCTS - MISCELLANEOUS

Pipe Meter

Inner Body of 99.5 Litre Medical Refrigerator

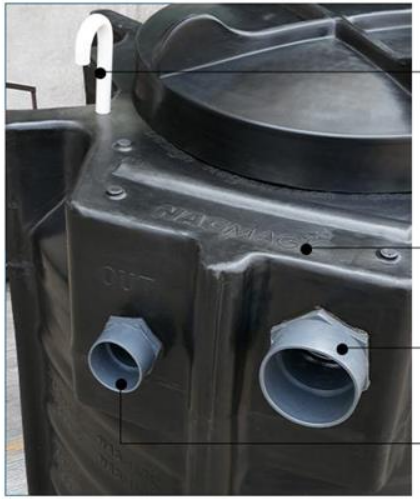
Pontoons

500 Litre Water Tank

WASTE TREATMENT DIVISION (WTD)

The DRDO Bio-Digester consists of two parts:

- A specially designed and manufactured Bio-Digester Tank – in rotationally moulded LLDPE or fibreglass
- Anaerobic Microbial Inoculum (AMI) – the bacterial component



BIO-STP (SEWAGE TREATMENT PLANT)

NAGMAGIC®

★ **Two stage treatment process:**

- Anaerobic digestion using a Bio-Digester to treat the sewage. Effluent suitable for use in irrigation, gardening, civil construction, etc.
- Optional secondary treatment making the effluent comply with CPCB norms. Effluent suitable for flushing toilets, etc.

★ Low on investment. High on performance. Very low running cost

★ Minimal maintenance with only one-time addition of inoculum

★ All sewage/organic matter is 100% bio-digested and gets converted into treated water and gas

★ Ideal for individual households, apartments, commercial establishments, educational institutions, etc.

Easy installation

100% Eco-friendly

Guaranteed results

No sludge formation life long

PERFORMANCE RESULTS OF BIO-DIGESTER AND BIO-STP SYSTEMS

NAGMAGIC®

Sr. No.	Parameter	CPCB/MPCB* Standards For				NagMagic Results Range	
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine Coastal Areas	Bio-Digester Effluent	Bio-STP Effluent
1	Suspended Solids mg/l (max)	100	600	200	100	100 - 150**	30 - 50
2	pH Value	5.5 - 9.0	5.5 - 9.0	5.5 - 9.0	5.5 - 9.0	6.5 - 7.5	6.5 - 7.5
3	Biochemical Oxygen Demand [3 days at 27°C] mg/l (max)	30	350	100	100	80 - 100	20 - 30
4	Chemical Oxygen Demand mg/l (max)	250	-	250	250	180 - 200	40 - 50

* CPCB: Central Pollution Control Board, MPCB: Maharashtra Pollution Control Board
** Inorganic suspended solids are a function of the input quality of water

NAGMAGIC®

- The monthly average running/operating cost of a 5 KLD (kilolitres per day) conventional STP is **Rs. 5.70 – Rs. 6.30 per litre**
- The monthly average running/operating cost of a 5 KLD NagMagic Bio-STP is **Rs. 0.55 – Rs. 0.65 per litre**
- The tanks for the Bio-STP systems are available in both rotational moulding and FRP
- The smallest system available can be used by 4 to 6 users in a domestic setting and 8 to 12 users in an industrial setting
- Theoretically, there is no upper limit for the number of users for a Bio-Digester tank

ENGINEERING SUPPORT DIVISION (ESD)

ENGINEERING SUPPORT DIVISION

- Provides end-to-end engineering support to all our plastic processing plants
- Well-equipped centralised Tool Room located at Urse (Pune)
- Almost all activities are carried out in-house, giving the company complete control over the entire tool making process

THIS DIVISION HANDLES THE ENTIRE ENGINEERING PROCESS

Handmade Prototype

Partly Machined and
Partly Handmade Prototype

QUALITY FOCUS

CERTIFICATIONS: TUV SUD

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH
certifies that

NAGMAGIC

K.K. Nag Pvt.Ltd.
Gat No. 393, At & Post Urse, Tal. Maval
Dist. Pune – 410506
India

including the sites and scope of application
see enclosure

has established and applies
a Quality Management System.
An audit was performed, Report No. 70716412.
Proof has been furnished that the requirements
according to

ISO 9001:2015

are fulfilled.
The certificate is valid from 2018-06-19 until 2021-06-18.
Certificate Registration No.: 12 100 30056 TMS.

Product Compliance Management
Munich, 2018-06-19

Page 1 of 2

ISO 9001:2015

CERTIFICATE

The Certification Body
of TÜV SÜD South Asia Private Limited

certifies that

NAGMAGIC

K.K. Nag Pvt. Ltd.
Gat No. 393, At & Post Urse, Tal. Maval, Dist. Pune - 410 506, INDIA

including the sites and scope of application see enclosure

has implemented an Environmental Management System
in accordance with ISO 14001:2015
For Scope of

Design, Manufacture, Marketing & Sales of Expanded Polypropylene (EPP), Expanded Polystyrene (EPS), Piocelan (EPO) and Other Foamed Plastics Shape Moulded Packaging Products and Components, Manufacture, Marketing and Sales of Bio-Digester Tanks.

The certificate is valid From 2020-09-15 until 2021-08-19
Subject to successful completion of annual periodic audits
The present status of this Certificate can be obtained on www.tuv-sud.in
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 104 00844
Date of Initial certification : 2009-08-20

Rahul Kale
Head of Certification Body
of TÜV SÜD South Asia Private Limited, Mumbai
Member of TÜV SÜD Group

Page 1 of 2

ISO 14001:2015

CERTIFICATE

The Certification Body
of TÜV SÜD South Asia Private Limited

certifies that

NAGMAGIC

K.K. Nag Pvt. Ltd.
Gat No. 393, At & Post Urse, Tal. Maval,
Dist. Pune - 410 506, INDIA

including the sites and scope of application see enclosure

has implemented an Occupational Health and Safety Management System
in accordance with ISO 45001:2018
For Scope of

Design, Manufacture, Marketing & Sales of Expanded Polypropylene (EPP), Expanded Polystyrene (EPS), Piocelan (EPO) and Other Foamed Plastics Shape Moulded Packaging Products and Components, Manufacture, Marketing and Sales of Bio-Digester Tanks.

The certificate is valid from 2020-09-15 until 2021-08-19
Subject to successful completion of annual periodic audits
The present status of this Certificate can be obtained on www.tuv-sud.in
Further clarifications regarding the scope of this certificate may be obtained by consulting the certification body

Certificate Registration No. 99 117 00552
Date of Initial certification: 2009-08-20
Date of Migration: 2020-09-15

Rahul Kale
Head of Certification Body
of TÜV SÜD South Asia Private Limited, Mumbai
Member of TÜV SÜD Group

Page 1 of 2

ISO 45001:2018

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH
certifies that

K.K. Nag Pvt. Ltd.
Gat No. 393, At & Post Urse, Tal. Maval
Dist. Pune - 410506
India

has established and applies
a Quality Management System for

Manufacturing of Expanded Polypropylene (EPP),
Expanded Polystyrene (EPS) and
Piocelan (EPO) Foamed Plastics products for automotive applications.
(without Product Design as per Chapter 8.3)

An audit was performed and has furnished proof
that the requirements according to

IATF 16949
First Edition 2016-10-01

are fulfilled.
Issue date: 2019-06-19
Expiry date: 2021-06-18
Certificate Registration No.: 12 111 30056/01 TMS
IATF Certificate No.: 0210909
Part of the certificate is an appendix.

Product Compliance Management
Munich, 2019-06-19

Page 1 of 2

IATF 16949:2016

QUALITY - OUR PRIMARY FOCUS

Our company's success stems from our commitment to high quality standards that we have maintained since our inception

We strive to make continuous improvement a way of life

Total Quality Management (TQM) is the guiding philosophy of our company

We have a very robust system of reviews from the apex corporate level down to the shop-floor level

We are a system driven company

We have won several awards for the quality of our products, even against international competition

CUSTOMER APPRECIATION - SELECT AWARDS AND CERTIFICATES

NAGMAGIC®

2015
WHIRLPOOL OF INDIA LTD
SUPPLIER EXCELLENCE AWARD
BRONZE SUPPLIER AWARD

2016
GODREJ & BOYCE
VALUED PARTNER EPS MOULDING

2016
TOYOTA KIRLOSKAR MOTOR
OPERATION SUCCESS CERTIFICATE

2016
TOYOTA KIRLOSKAR SUPPLIERS ASSOCIATION
BRONZE AWARD AT THE QUALITY CIRCLE COMPETITION

2016
WHIRLPOOL OF INDIA LTD
SUPPLIER AWARD QUALITY EXCELLENCE

2017
LG ELECTRONICS
BUSINESS EXCELLENCE - SAFETY AWARD

2017
LG ELECTRONICS
SAFETY AWARD

2017
WHIRLPOOL OF INDIA LTD
QUALITY EXCELLENCE AWARD

2018
CII-SOHRABJI GODREJ GBC
GREENCO BRONZE AWARD

2018
QUALITY CIRCLE FORUM OF INDIA
BRONZE AWARD

2019
GODREJ & BOYCE
BEST SUPPLIER - GREEN CHAIN
SUPPLY AWARD

2019
QUALITY CIRCLE FORUM OF INDIA
GOLD AWARD

2015, 2018, 2019
TOYOTA KIRLOSKAR MOTOR
DELIVERY CERTIFICATE

2015, 2016, 2017, 2018, 2019
TOYOTA KIRLOSKAR MOTOR
ZERO PPM - ZERO DEFECT SUPPLIES

2016, 2017, 2018, 2019
TOYOTA KIRLOSKAR MOTOR
QUALITY CERTIFICATE

PEOPLE FOCUS

OUR PEOPLE - OUR BIGGEST ASSET

NAGMAGIC

- "Once a person joins the company, he or she should not only become an employee of the company, but should also become a member of the K. K. Nag family. It is our responsibility to encourage and help people grow" – an excerpt from the company philosophy
- We have a highly experienced and devoted team with long years of service (the longest tenure to date is 42 years and 5 months)
- Many members of the leadership team joined the company at the start of their careers and worked themselves up the ladder
- Every individual is expected to act as an HR Manager and is responsible for the welfare of his or her subordinates
- The Management and the Union share an excellent relationship – our goals and objectives are completely aligned

- We have adopted the local school in Urse village, "Shri Padmavati Vidya Mandir"
- We have provided them with computers, built a science laboratory and regularly donate laboratory equipment
- We also organise eye check-ups and other health initiatives for the students
- We provide transportation to take students for their examinations that are conducted at remote centres
- Students are provided help and guidance for their overall development

NAGMAGIC

Padmavati Vidya Mandir School

Inauguration of Science Lab

NCL faculty demonstrating science experiments

Science Lab in use

Lab equipment provided

Benches for primary classes

Free eye check-up

NAG FOUNDATION

The Nag Foundation is a non-governmental organisation that was established by K. K. Nag Pvt. Ltd in 1989

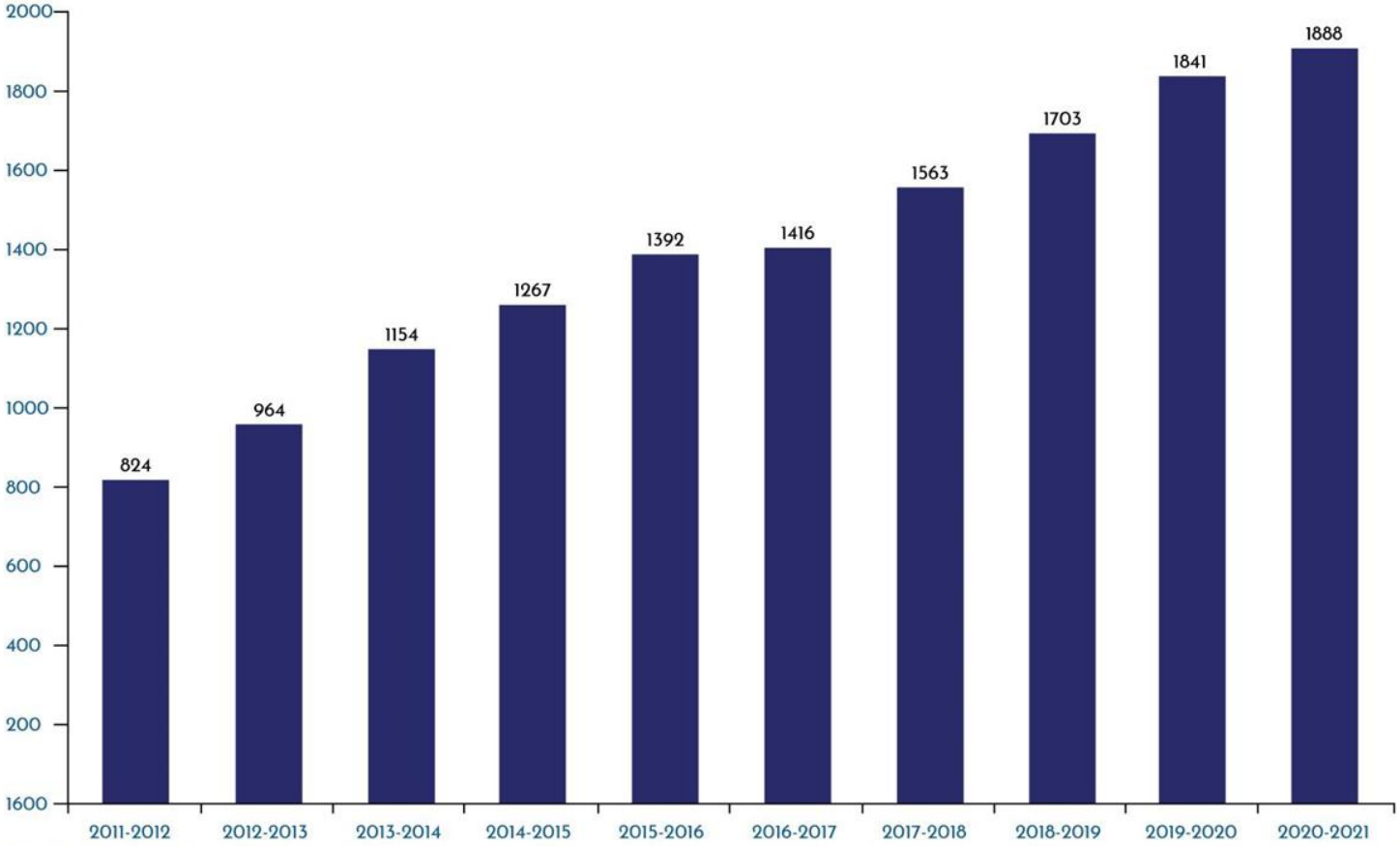
When it was first established, the Nag Foundation played a major role in promoting local artists and art in Pune

The foundation changed its mandate to Cancer Care, Research and Education in 2011

The foundation's primary focus is "Promoting Excellence in Cancer Care through Education, Research, Advocacy & Support"

SALES FIGURES

SALES GROWTH (₹ IN MILLIONS)



NAGMAGIC®

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Fax: +91 20 2615 3180
Email: sales@kknag.com, info@kknag.com

Corporate Office:
371/A North Main Road
Koregaon Park
Pune - 411001, Maharashtra, India

Corporate Film

Please watch our corporate film to know more about us, our ethos, and our culture
To do so, please click on the link given below, or copy it and paste it in your browser window
https://vimeo.com/257067627
When prompted for a Password, please use the following
Nagmagic@12345 (please note that the password is case sensitive)

THANK YOU!