The Shetkari Shikshan Mandal

Bhivarabai Sawant College Of Engineering & Research

Accredited by NAAC With 'A' Grade

(Approved by A.I.C.T.E. & Govt. of Maharashtra Affilited To Savitribai Phule Pune University West/1-3669721/2010.New dated 13 Jul 2010.)

S.No. 12/1/2 & 12/2/2, Narhe, Taluka-Haveli, Pune-411041.

Phone: 020-24608500/01 Website: www.tssm.edu.in Email: principal@tssm.edu.in Ph.D.LMISH PRINCIPAL

Prof.Dr.T.J.Sawant
BE(Elec.),PGDBM,Ph.D
PRESIDENT

Key 7.1: Institutional Values and Social Responsibilities

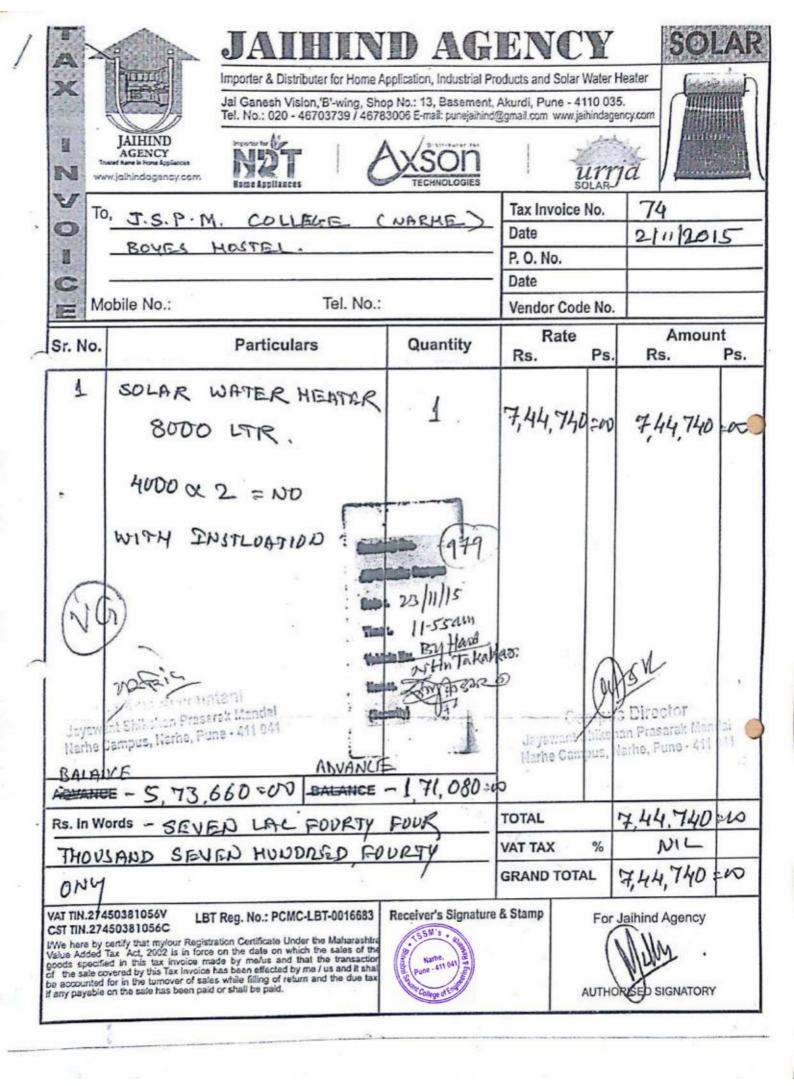
- 7.1.2: The Institution has facilities and initiatives for
- 1. Alternate sources of energy and energy conservation measures
- 2. Management of the various types of degradable and non-degradable waste
- 3. Water conservation
- 4. Green campus initiatives
- 5. Disabled-friendly, barrier free environment

Index of Bills for the purchase of equipment's for the facilities

Sr. No.	Details of Facilities	Digital Page No.
1	Solar Water Heater	2
2	LED Lights	9
3	Biogas Plant	14

Narhe.
Pune - 411 041 Page of English

Principal, BSCOER,Pune. PRINCIPAL TSSM's Bhivrabai Sawant College of Engineering & Research Narhe, Pune - 411 041





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" The Shetkan Shikshan Mandat, Gangli

Bhivarabai Sawant College Of Engineering & Researed

(Approved by A.I.C.T.I. & Govf. of Maturachtes Affinated to Prose their entry) West/1-3669/21/2010 New dated 13.Jul 2010)

5 No 12/1/2 &12/2/2, Nathe, Taluka Haveli, Pone 4 1104 I

Phone: 020 64703673,4,5 Website: www.tr.un.in

Fmail bscoer@pspm.edu.m.

In to V .to-Bles 19. 11 geteinge ti

M SIDENT

PURCHASE ORDER

To, Vitronics Controls, S.No. 58/4/4/2. Kondhawa, Punc: 411 048 Tel: 26962548/ 26961311 P.O. No. BSCOER/PUR/15 16/ 5 C.3 2

Date: 05/09/2015

SUBJECT: Purchasing Equipments for Renewable Energy Systems.

Dear Sir.

With reference to the above referred quotation. We would like to place an order for the supply ϵ_1 the goods shown below to this institute on the terms and conditions mentioned. Lotal amount of PO is in words:- Rs 2.03.500/- Two Lac Three Thousand Five Hundred Only. List of equipment- & instrument attached herewith please confiner it ail technical specification. If any query idease contact nor harnly F technical person.

TERMS AND CONDITIONS OF PURCHASE ORDER

A) Order Acceptance:

The acceptance of this order must be confirmed within ten days.

B) Delivery:

- Timely delivery is the essence of this order. If the delivery is not made in the period/ by the date stipulated in this order, the order stands cancelled automatically and no claims will be entertained.
- Delivery should be made as discussed within 4-6 weeks from the issue of purchase order.
- c. Outstation parties should inform us the name and address of the transport company and its branch office in Pune well in advance, before sending the goods, and delivery will be necessarily at the college site
- d. Delivery of the goods covered under this PO shall be accompanied by delivery challan,
- Delivery of college site and to concentration charges, if any will be below by the supplier.
- f. Octroi, if applicable shall be parable, against receipt in favor of Institute name only.

(') Inspection:

- a. The goods supplied should confirm to the specifications given in this purchase order, if found inferior, the goods will be rejected and you will be required to take the equipment back, at your own cost and risks
- b. Inspection of the goods will be carried out at our premises to our satisfaction.

D) Guarantee:

The goods a equipments supplied shall be guaranteed for minimum. One year satisfactory performance against faulty workmanship or defective components / assembly

E) Payment: Bill should be sent in duplicate addressed to the Principal Bhivarabai Sawant College of Engineering & Research, Narhe, Pune. Showing taxes if any.

a. Advance payment of 50% will be paid along with the purchase order. Remaintrep balance after Delivery & Ok Report .

b 100% onyment of the till and in cheque. c. Bill will be passed against production of gate pass, delivery challan, final invoice a m. report.

d. It is necessary to produce immediately "Receipt" for payment received by the supplicates

F) Insurance: Transit should be arranged by the supplier whenever necessary at their cost.

G) Taxes: Government taxes Vat included in total amount.

11) Penalty: If goods are not delivered in time penalty of 2% will be charged per week.

Accepted P. O. No: BSCOER/PUR/15-16/ Date: 05/09/2015	On behalf of Management TSSM's Bhivarah Sawant College of Engineering & Research, Narhe, Punc
Authorized Signature: Name: Designation: Seal	President Princip.



TSSM's Bhivarabal Sawant College of Engineering and Research, Narhe 41

Department of Electrical Engineering

Subject: Renewable Lnergy Systems

upplier	Vitronics Controls
- Pp. C.	Technical Specifications System includes:-
	250Wp solar panel 34 Nos.
	Battery 100Ah : 4 Nos.
	Charge Controller : 1 No.
	Inverter: 1kVA On grid, o/p: 230V AC, 50112
	Control panel for experiments equipped with meters:-connecting terminals and switches.
	Solar Panel:-
	Pm 250Wp
	Voc . 36V/43V
	isc : 8.89A/7.56A
	Vmp : 29V/36V
	Imp: 7 63A
	Mounting structure:-
	Only owner quoted structure suitable for 4 mir.
Description	
	Junction Box: IP 65protected JB
	Inverter: 1kVA Off grid-01 no.
	Inverter 1 EVA ON grid-01 no.
	MPPT Charger:- 01 No
	Protection and the control of the co
	AC & DC Cablest Poly Lable, Laple cable/RR cable/ Advance cable/ Atlas or any othe reputed ma
	Standards:-IEC 61215/61730-1/2/TUV Safety class-II
	Control Panel with Inverter:-
	Capacity 1000VA
	Input Voltage : 190°250V AC
	Output Voltage on Mains mode ; same as input
Cost of	
Setup	Rs 2,00,000/-+installation & Commissioning Rs 20,000/
Total Cost	220000
Discount	16500
Discounted Total	203500
Payment terms	50% with PO 50% after Delivery with Ok report.
The second secon	Town at a south
	Free at our site.
Installation & Trainnig	Free at our site.



President The Shetkari Shikshan Mandai

TSSM's BhivarabaiSawant College of Engineering and Research, Narhe, Pune-41 Department of Electrical Engineering

30/10/2015

To,

The Principal

BSCOER, Narhe.

Subject: Demonstration of Renewable energy system Lab equipments

Respected Sir,

With reference to the above subject Mr. Vaibhav Kate has given demonstration of

following laboratory setup:

Sr. No.	Description of Goods	Quantity
1	Renewable energy system	1
	250W Pannel+Battery 100AH-4+Mounting Structure+Juction	
	Box+1KVA off Grid my+with MPPT Charges with polycob Cable	1

Delivery and demonstration of equipment is given on 30th Oct 2015.

The following staff members were present at the time of demonstration

Sr. No.	Name of Staff Member	Sign
1	Prof. U. K. Shinde	- tinell
2	Prof. A. P. Kinge	Stort)
3	Prof. K. C. Muley	e- 4
4	Prof. V. H. Patil	Darsho

This is for your information.

Thanking you.

Lab Incharge

(Project Lab)

PHOD !

Electrical Dept.



(Security) This is a Computer Generated Invoice

paid or shall be paid.

BSCOER 2015-16

Vitronics Controls

Ledger Account

1-Apr-2015 to 30-Oct-2015

			Vch Type	Vch No./Excise Inv.No. Debit	
Date 21-9-2015	То	Particulars PNB AIC No-3984002100005125 ch. 854347 dtd 15/9/2015 being purch lab euipment for electrical dept as per No. 5538 for 50% advance payment p	Payment ase PO	bnk 1,01,750.00	
14-10-2015	Ву		Journal ectrical	15	
	То	Closing Balance		1,01,750.00 1,01,750.00 2,03,500.00	
				1	

Accountant

Name. 411 041 Page Of Selection of Selection

A BETUI PROW BICK
SANGLI

THE SHETKARI SHIKSHAN MANDAL, SANGLI

	PAYMENT VOU	CHER	
Rs. 66000 -	_	Date: \$ / 6 /20	
	ly Efficiency Service	es Lit.	_
a sum of Rs. Sixty	six thousand only	_	_
being purchase	for LED Tubelights	For Electidept. po. N	366
and debit on	account.	Received the sum of	
Paid by cash / cheque on _	cheque,	Rs. 660001-	
Bank PNB			
Branch Satora	Road.		
Cheque No. 638119	Date: 5 10 17		
Mone			-
Accountant	Principal/Director	Receiver's Signature	

Name of the Institute : BSCOCP

Campus Name :



Receiver's Signature

TAX INVOICE



Name & Address of Seller:

Energy I Hiciency Services Limited

A-1, 8th Floor, Chandramukhi building,

gamnath Goyanka Marg, Nariman Point, Mumbai 400 021

Ship from: Pune IJIALA Godown

Godown Address:

Alankit Umited, 812,8havanii Peth,Opposite Padamiji Paradise Pune

411042, Contact Person - Mr. Shivam, EESL 8107575148

Contact Number: 022-40021193

Website: www reslindia org

GSTIN: 27AACCE4248H1ZO

CIN .:- U40200DL2009PLC196789M

PAN No.: AACCE4248H

INVOICE NO.	MH/SEP/17-18/02	PO No.	TSSM/BSCOER/10366/2017-13		
INVOICE DATE	08-09-2017	PO Date	07-09-2017		

Sold To		Ship To			
Customer Name	The Shetkari Shikshan Mandal, Sangli	Customer Name	The Shetkari Shikshan Mandai, Sangli		
Billing Addresss	TSSM's Bhivarabai Sawant College of Engineering & Research, S. No.12/1/1 & 12/2/2, Narhe, Pune - 411041	Shipping Addresss	TSSM's Bhivarabai Sawant College of Engineering & Research, S. No. 12/1/1 & 12/2/2, Narhe, Pune - 411041		
State Name	Maharashtra	State Name	Maharashtra		
State Code	27	State Code	27		
SSTIN, If registered		GSTIN, If registered			

		HSN/ Quantity Rate per	Total Value	CGST		SGST		Total Amount		
Sr. No	Description of Goods/ Services	SAC code		Unit (INR)		Rate	Amount	Rate	Amount	(INS)
1	20 W LED Tube Light	9405	300	196.43	58,929	6%	3,536	5%	3,536	66,000
	(lanko M									
				TOTAL	58,929		3,536		3,536	66,000

Total: (Value in figure) Rs.66,000/-

Total: (Value in words) Rupees Sixty Six Thousand Only

RTGS/NEFT Details:

Bank: ICICI Bank Ltd. Account No.: 000705041800 IFS Code: ICIC0000007

Address: 9A, Phelps Building, Inner Circle, CP, New Delhi- 110 001

Narrie. Pune 411 041 05 For Energy Efficiency Services Limited





सताय रोड, पुणे (महा) Satara Road, PUNE (Mah) - 411037

RTGS/NEFT IFS Code: PUNB0398400

राजी शास्त्राओं पर देय PAYABLE AT ALL BRANCHES RAY THE YALLD FOR THREE MONTHS ONLY

Energy Efficiency Services Limited

या धारक को अभ्यास

क्रपये RUPEES **Sixty Six Thousand Only**

66,000.00

3984002100005125

चालू खाता CURRENT A/c

For BHIVARABAI SAWANT COLLEGE OF ENGG & RESEARCH

Authorised Signatory(ies)
Please sign above

お明明

GJG

"638115" 411024013C

29





THE SHETKARI SHIKSHAN MANDAL, SANGLI

(Public Trust Registration No. E - 954, Sangli.)
Campus: Si No 3372 BAVDHAN (Khind): PAUD ROAD, NEAR CHANDANI CHOWK, OPP PARANJAP's PROJECT. PUNE - 38 TEL: 020 - 64107818 64102877, FAX :- 020 - 22952361. Website: www.pvpit.in

Corporate office: Sawart Corner, Katraj Chowk, New, Pune - Mumbai By Pass Highway, Katraj, Pune - 46

Phone: (020) 24317383/84. Tele-fax: (020) 24317389 www.jspm.edu.in

of, Tanaji Sawant E. BE (Elec) MISTE PRESIDENT

Giriraj Sawant

SECRETARY

Ref No. TSSM/BSCOER/103 6 G/2017-18

Date: 07.09.2017

PURCHASE ORDER

TO.

ENERGY EFFICIENCY SERVICES LIMITED.

Mumbai Kshetriya Karyalay, A-1,8 floor,

Chandrmukh Bhavan, Ramnath Goynaka

Narimam Point,

Mumbai-40 0021.

Subject.: PURCHASE ORDER FOR SUPPLY OF LED Tubelights . Kind Attn:- Shivam -8107576148 (Regional Office Maharshtra)

Dear Sir,

With Reference to your quotation. We are placing herewith our Purchase Order for supply for LED Tubelights as description given below.

Item Description	Qty. Nos.	Unit Rate	Total Amount Rs.
Surya / Philips LED Tubelight 20W, CRI > 80, CCT= 5700 k ANSI, PF> 0.95, class IP 65 or above. Housing of pressure die cast alluminium alloy and heat sink extruded alluminium.	300 qty.	220.00	66,000,00
			66,000.00
Total Amount			00,00
12% GST include in above rates.		66,000.00	
	Surya / Philips LED Tubelight 20W, CRI > 80, CCT= 5700 k ANSI, PF> 0.95, class IP 65 or above. Housing of pressure die cast alluminium alloy and heat sink extruded alluminium. Total Amount 12% GST include in above rates.	Surya / Philips LED Tubelight 20W, CRI > 80, CCT= 5700 k ANSI, PF> 0.95, class IP 65 or above. Housing of pressure die cast alluminium alloy and heat sink extruded alluminium.	Surya / Philips LED Tubelight 20W, CRI > 80, CCT= 5700 k ANSI, PF> 0.95, class IP 65 or above. Housing of pressure die east alluminium alloy and heat sink extruded alluminium. Total Amount 12% GST include in above rates.

TERMS & CONDITIONS

Taxes :- All taxes inclusive. i.)

Billing & Delivery: Immediately at TSSM's Bhiwarabai Sawant Collage of Engineering & ii.)

Research, Narhe.

Payments:- 100% along with PO. iii.)

Warranty:- Two year replacement warranty. iv.)

All bills should be in favor of institute name only. v.)

100" . Porposer P.O



he Shetkari Shikshan Mandal.

ORL III	Reg. Office: P-37, M.I.D.C.		KOLHAPUR -	416 234 ©): 0231- 26713	A Property and a second a second and a second a second and a second an
Consignor :	Sintex - Ba	PL UP			PATER NAME OF STREET	YBILL
Consignee :	G.K. Kedari	Nark	re. I	un-t.	Date : 1	4/12/17
Freight Payal		#1	All closes of	44	From : V	olhapyr
Remarks :	992167153	7 -80	क्रारीमा	A.	V. No.:	HILLEM 18
Party's Inv.	No. 385°				Inv. Value :	
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	(Security)	DI	RIVER CO	PY	1	- 1
Recei	ver's Signature With Stamp	See Overle	af for our Branc	hes Address		



DELIVERY CHALLAN



Flat No. 4, Shneh Complex, Behind Ankur Electronics, 1st Floor, Deep Banglow Chowk, Shivaji Nagar, Pune - 16

Contact: 020 - 41222986 www.urjabiosystems.com

Mr. G. K. Kedelli At pust - Nache Bist. - Dune

D. C. No.	:	203	Dt.: 13	12/2017
P. O. No.	:			
P. O Date	:			1 1
Made of T	rans	enort ·		

S. NO.	DESCRIPTION	QTY.	RATE	AMOUNT
1)	Sintex Béo Gas plant	01	33000	33000
	(Renewable energy device & spure parts)		calments.	
District the second	JSPM Harhe Cantous			-
	Date: 15/12/17 Time: 09.45 AM Vehicle Haz/MVI 09 EM 1877			
	Name:			
	Mr.	De .		33000=2
Tax Act. is made by me/us	preby certify that my/our registration certificate under the Maharashtra Value Added 2002 is in force on the date on which the sale of the goods specified in this Tax Invoice by me/us and that the transaction of sale covered by this Tax Invoice has been effected a and it shall be accounted for in the turnover of sale while filing of return and the due y, payable on the sale has been paid or shall be paid.		For URJA B	IO SYSTEMS

CST TIN NO. 27890660077C w.e.f. 30/05/2008

Terms & Conditions: GG7 — ARCIJ 4644 A11) Goods once sold will not be taken back without our consent in writing.

2) All payments are requested to be made without on demand.

3) 24% Interest will be charged if the payment is not made within 30 day.

4) Our responsibility ceases once the goods have left our premises.
5) Subject to Pune Jurisdiction. (E. & O. E.)

norised Signatory

To,

The President,

TSSM's BSCOER Narhe,

Pune.

Subject:-Permission for Anaerobic Digester for Narhe Campus.

Respected Sir,

One of the project group of final year Civil Engineering student has undertaken the project on "Anaerobic Digester for Food Waste of Narhe campus." As we are going to use the food waste in the campus as feeding material to the digester, our campus will automatically come under the category of Green Campus. Also the methane generated in this process will be utilized for cooking purpose in the college. This will also help us in the NACC process.

The Quotation & Comparative statement are attached herewith. The minimum Quote of Rs.98,000/- is given by Ideal Enterprises (SINTEX).

Therefore we request you to kindly grant permission to carry out the project & sanctioned an amount of Rs.98,000/-. -20,000/- (From Canteen Owner).

Thanking you. =78,000/-

Thanking you.

Yours Faithfully,

(Civil Engineering Dept.)

Narhe,

(TSSM's BSCOER, Narhe)

Recommended.

Rhosalette.
2:8-9-17





TSSM Bhivarabai Sawant College of Engineering and Research, Narhe, Pune.



Date: - 22/09/2017

DEPAPRTMENT OF CIVIL ENGINEERING

TITLE OF PROJECT

"ANEROBIC DIGESTER

FOR

FOOD WASTE OF NARHE CAMPUS"

GROUP MEMBERS:-

- KIKALE OMKAR A.
- BIRAJDAR AKASH D.
- KORADE SNEHAL S.
- UGALMOGLE VAIBHAV R.

UNDER THE GUIDENCE OF PROF. KHATMODE N.P.



Broad area: Civil Engineering

Sub area: Environmental Engineering

Details of Students Involved in Project:-

Sr. No.	Name of Student	Department	College	Email ID	Contact Number
1	Omkar Kikale	Civil	BSCOER	kikaleomkar@gmail.com	9960757616
2	Vaibhav Ugalmogale	Civil	BSCOER	vuglmougle@gmail.com	7720876553
3	Akash Birajdar	Civil	BSCOER	akashbirajdar111@gmail.com	7758002610
4	Snehal Korade	Civil	BSCOER	ksnehal.sr@gmail.com	7709767889

Faculty Advisor Name: Prof. Khatmode N.P.

Department: - Civil Engineering

Name of College: - TSSMS BhivarabaiSawant College of Engineering, Narhe, Pune

E-mail address: khatmodenitin8989@gmail.com

Contact Number: 7387888989

Introduction:-

The uses of renewable energy sources are becoming very necessary due to the limited reserves of fossil fuels and global environmental concerns for the production of electrical power generation and utilization. In remote areas, villages, it is easy to get more amount of biomass. Hence by the use of these systems consisting of Biomass to generate methane gas and electrical energy in these remote areas can be more economical. Kitchen (food waste) was collected from different hostels of to the reactor which works as anaerobic digester system to produce biogas energy. In College campuses by utilizing the hostels food waste and other biomass residues can be utilized for better purposes. Biogas production requires anaerobic digestion. This study will gives an analysis on how Kitchen food waste can be converted into biogas and its utilization.

PROBLEM STATEMENT:-

Deforestation is a very big problem in developing countries like India, most of the part depends on charcoal and fuel-wood for fuel supply which requires cutting of forest. Also, due to deforestation it leads to decrease the fertility of land by soil erosion. Use of dung, firewood as energy is also harmful for the health of the masses due to the smoke arising from them causing air pollution. We need an eco-friendly substitute for energy.

Many cities in developing countries are facing a serious problem in managing their solid wastes. The Municipal Solid Waste (MSW) consist of food and organic waste followed by plastic, paper, textile, glass, metal, wood etc. food and organic waste has contribute to high moisture content. Among these the food waste effects on the environment it mostly consists of uneaten food and food preparation waste from residence, restaurants, hostel, canteen etc.

Also in most of cities and places, kitchen waste is disposed in landfill or discarded which causes the public health hazards and diseases like malaria, cholera, typhoid. Inadequate management of wastes like uncontrolled dumping bears several adverse consequences: It not only leads to polluting surface and groundwater through leachate and further promotes the breeding of flies, mosquitoes, rats and other disease bearing vectors. Also, it emits unpleasant odor and methane which is a major greenhouse gas contributing to global warming. The food waste is the second largest category of MSW food waste generation and disposal has become a major global issue.

Many technologies are currently used for food waste. To choose a certain technology for waste treatment, the characteristics of the feedstock should be considered. The food waste is for the most part, disposed of in landfill. But it creates various problems such as the water body contamination, land contamination and odor generation.

SOLUTION:-

Treatment techniques are generally landfill, incineration and anaerobic digestion.

1) Landfill -

Means the disposing of waste in land. Main disadvantages of the landfill are it requires the land for the disposal waste, dumping food waste in a landfill causes odor as it decomposes, attracts flies and vermin and has the potential to add Biological Oxygen Demand (BOD) to the leachate, risk of land and water pollution, contribution to global warming, and economically expensive

2) Incineration -

This is a disposal method in which solid organic wastes are subjected to combustion so as to convert them into residue and gaseous products. It is a controversial method of waste disposal, due to issues such as emission of gaseous pollutants.

Anaerobic digestion –

Anaerobic digestion is nothing but, a series of processes in which microorganisms break down biodegradable material in the absence of oxygen. Anaerobic digestion is a renewable energy source because the process produces a methane and carbon dioxide rich biogas suitable for energy production helping replace fossil fuels. Also the nutrient rich solids left after digestion can be used as fertilizer. Anaerobic digestion as a pretreatment prior to landfill disposal or composting offers several advantages, such as minimization of masses and volume, better handling of wet waste, inactivation of biological and biochemical processes in order to avoid landfill gas, less area requirement and odor emissions, reduction of landfill settlements and energy production in the form of methane. Therefore, anaerobic digestion of biodegradable solid wastes can be considered an alternative option to improve the environment condition caused by organic solid waste and at the same time taking an advantage as an environmentally friendly resource of energy.



SCOPE OF THE PROJECT:-

The present study deals with the realizing need of as alternative fuel. The studies will carried out at "Narhe Technical Campus" on food waste for the better exploitation on biogas production.

Biogas is combustible gas which is produced of a fermentation of cellulosic material such as cow dung also washes from food processing and the household.

It can directly combusted as a source of heat for cooking or used with internal combustion engine. The slurry produce after digestion can be used directly as valuable manure for crop production.

OBJECTIVES OF THE WORK:-

The prime object of this work is:-

- 1) To investigate the prospect of kitchen waste for biogas production
- 2) To design an anaerobic digester for the TSMM'S and JSPM Narhe Campus
- 3) To carry out performance evaluation of anaerobic digestion of food waste
- 4) Ultimate protection of environment from the bad effect of methane gas that would be produced by uncontrolled anaerobic digestion

WASTE QUANTITY ESTIMATION IN TSSMS AND JSPM, NARHE CAMPUS:-

Estimated Capacity (ByStudents) of biodegradable waste per day: 25 Kg

PRESENT SITUATION:-



Fig. Solid waste being disposed inside the college campus



Solid waste management activities in comprise of road sweeping, drain cleaning and cleaning of toilets. Work in this area is entrusted to worker.

Road sweeping is fairly satisfactory.

Collection of waste

Segregation at Source - Needs to be taken up by motivating the people, hoteliers, and other workers.

As per survey in college campus, nearly 40 kg of food waste is generated which is directly dumped into PMC garbage.

Waste Collected is required transported to designated area.

Waste Composition

Solid Waste contains many things; Broadly, the waste is categorized into groups as follows:

Biodegradable (Wet)

This Comprises of:

- · Kitchen waste such as vegetable and fruit peels. Food leftovers, bones, meat, eggshells
- · Dry leaves, Garden waste

The above is suitable for composting

The AD would however not process egg shells, coconut shells and dry leaves. All other biodegradable matter can be processed

Recyclable (Dry)

This comprises of

- Paper, Plastics
- Metal scrap
- · Glass, rubber, cans, thermo Cole, wood etc.

The above is suitable for recycling

ANAEROBIC DIGESTER SET-UP -



PROCESS DESCRIPTION

GENERATING BIOMASS FROM KITCHEN WASTE FOOD

Anaerobic digestion (AD) is a microbial decomposition of organic matter into methane, carbon dioxide, inorganic nutrients and compost in absence of oxygen. This process is also known as bio-Methanogenesis.

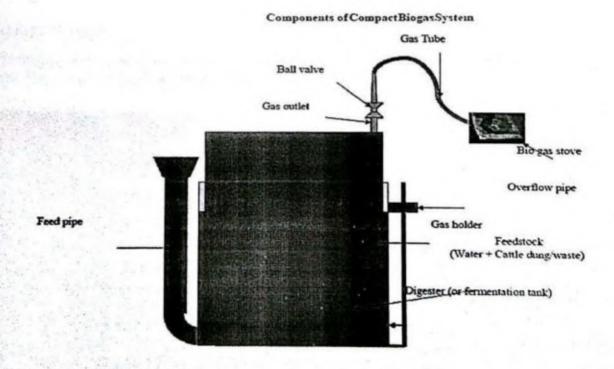
In the generalized scheme of the anaerobic digestion, the feedstock is collected, coarsely shredded and placed into a reactor with active inoculums of methanogenic microorganisms.

Generally three main reactions occur during the entire process of the anaerobic digestion to methane: hydrolysis, acid forming and methanogenesis. Although AD can be considered to take place in three stages all reactions occur simultaneously and are interdependent.

LOACTION:-

Please give location

DETAILS OF ANAEROBIC DIGESTER:-





Materials

A biogas production system consists of the following features:

a) Substrate inlet

This consists of a receptacle for the raw fresh organic waste and pipe of at least 10 cm diameter leading to the digester. The connection between the inlet pipe and the digester must be air tight.

b) Digester

This is the reservoir of organic wastes in which the substrate is acted on by anaerobic micro organisms to produce biogas.

c) Gas Storage /Reservoir

Depending on the proposed design, this may be simply an empty but enclosed space above the slurry in the digester, an inverted floating drum whose diameter is just slightly smaller than that of the cylindrical digester or an air tight polythene tube with an inlet -outlet outfit.

d) Gas Burner

This may be a special lighting lamp or a modified burner for cooking.

e) Exhaust outlet

This consists of a pipe of similar size to the inlet pipe connected to the digester at a slightly lower level than the inlet pipe to facilitate outflow of exhausted.



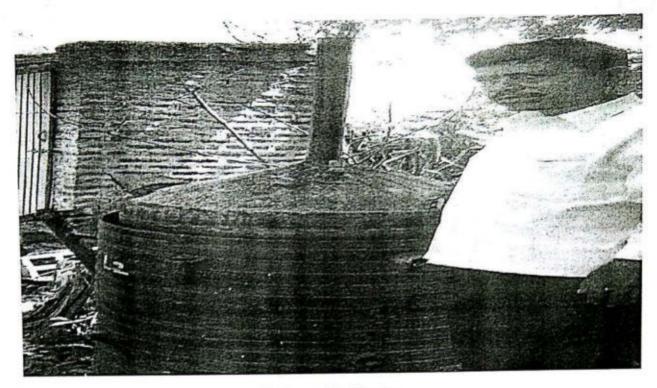


Fig Anaerobic digester

Beneficial end Products:-

Gas production rate, (G)

One kilogram of kitchen waste, if well digested, yields 0.3m3 of biogas according to Dublin, 2008. The gas production rate (G) for the available kitchen waste, working with 50kg/day was found to be given by:

$$G = W \times 0.3 = 25 \times 0.3 = 7.5 \text{ m}^3/\text{day}.$$

Active slurry volume, (V)

The active slurry volume in the digester is directly related to the hydraulic retention time (HRT). This is the theoretical time that a particle or volume of liquid waste added to a digester would remain in the digester. It is calculated as the volume of the digester divided by the volume of slurry added per day and is expressed as days (Niangua, 2006).

Active slurry is therefore given by: Vs = HRT x 4500 / 2 x 50 , HRT = 30 days

 $V_S = 1.350 \text{ m}^3$

This slurry contains very stable organic matter so we can use it as a fertilizer.



According to Literature Survey it concludes that Just 2 kg of such feedstock produces about 500 g of methane. (ARTI - Appropriate Rural Technology of India, Pune (2003)

- For 25 kg of Food Waste methane gas production will be 1- 1.2 kg/day (LPG)
- · If we install the plant

We can save Total amount per month = $1 \times 70.58 \times 30$

Rs. 2200/-





TSSM Bhivarabai Sawant College of Engineering and Research, Narhe, Pune.



Comparative Statement from 3 different Venders Quotation for 25 kg food waste is as follows and same attached here within

SR NO	COMPANY NAME	AMOUNT
1	Appropriate Rural Technology Institute (ARTI)	Rs.1,58,000/ 5 m3 Ps 57,500/ 2 m3
2	Ideal Enterprises (SINTEX)	Rs.98,000/-
3	Urja Bio system pvt.ltd.	Rs.1,38,000/-





"The Shetkari Shikshan Mandal, Sangli"

Bhivarabai Sawant College Of Engineering & Research

(Approved by A.I.C.T.E. & Govt. of Maharashtra Affiliated to Pune University.)
West/1-3669721/2010.New dated 13Jul 2010.)

S.No.12/1/2 &12/2/2, Narhe, Taluka-Haveli, Pune-411041

Phone: 020-64703673,4,5 Website: www.tssm.in

Dr. G. A. Hinge

Email: bscoer@jspm.edu.in

Ph. D.

PRINCIPAL

PRESIDENT

D.E.E., B.E.(Flec.) MISTE Ph. D.

Ref. No. TSSM's/BSCOER/PO/139

PURCHASE ORDER

Date :21/09/2016

15/11/2017

To,
Appropriate Rural Technology Institue,
Survey no 13, 2nd Floor,
Maninee Apartments, Narhe road,
Dhayari Gaon, Pune – 411041.

Subject: Purchase order of Anaerobic Digester for food waste(Bio-GAS)

Dear Sir,

With reference to your quotation dated \(\frac{12}{47}\)\(\frac{4}{2}\) 2017, We are placing herewith our purchase order of Anaerobic Digester for food waste(Bio-GAS), as per below mentioned specification with terms & conditions description given below.

61 11 11	Material Specification Description	
Biogas Unit A. Digester B. Gas holder	HDPE/LLDPE 2000 Lit HDPE/LLDPE 1500 Lit	36,000
Crusher with stand (single phase) 10Kg I Phase per hour		15,000
Fabricated Guide for Gasholder	Support for the gasholder	3,500
Plumbing Material & accessories	PVC pipes, elbow,MTP,FTP etc	5,000
Cow dung	Inoculums of biogas bacteria	2,000
Biogas Burner	Burner with stand single	3,000
Sundry Material	Bucket, mugs, pipes, etc	
Manpower		15,000
Travel for Experts & Technicians (2 visits)		2,000
Contingencies		2,500
ARTI Technology Transfer charges		3,500
Transport of Material	蒸	5,000
Institutional Overheads	•	5,000
Grant Tota	1	97,500
	B. Gas holder Crusher with stand (single phase)10Kg per hour Fabricated Guide for Gasholder Plumbing Material & accessories Cow dung Biogas Burner Sundry Material Manpower Travel for Experts & Technicians (2 visits) Contingencies ARTI Technology Transfer charges Transport of Material Institutional Overheads	B. Gas holder Crusher with stand (single phase)10Kg per hour Fabricated Guide for Gasholder Plumbing Material & accessories PVC pipes, elbow,MTP,FTP etc Cow dung Inoculums of biogas bacteria Biogas Burner Burner with stand single Sundry Material Bucket, mugs, pipes, etc Manpower Travel for Experts & Technicians (2 visits) Contingencies ARTI Technology Transfer charges Transport of Material Institutional Overheads Grant Total

TERMS & CONDITION

1. Delivery: - By Hand.

2. Payment: - 80% advance payment & 20% after completion of the project.

Principal Principal ant College of Seering & Research See 12/1/2 & 12/2/2, Narhe Sel- Haveli, Pune-411 041



Prof. Tanaji Sawant

D.E.E., B.E.(Elec.) MISTE Ph. D.

"The Shetkari Shikshan Mandal, Sangli"

Bhivarabai Sawant College Of Engineering & Research (Approved by A.I.C.T.E. & Govt. of Maharashtra Affiliated to Pune University.) West/1-3669721/2010.New dated 13Jul 2010.)

S.No.12/1/2 &12/2/2, Narhe, Taluka-Haveli, Pune-411041

Phone: 020-64703673,4,5 Website: www.tssm.in

Dr. G. A. Hinge

Email: bscoer@jspm.edu.in

Ph. D.

PRINCIPAL

Ref. No. TSSM's/BSCOER/PO/139

PURCHASE ORDER

Date :21/09/2016

15/11/2017

To,

PRESIDENT

Appropriate Rural Technology Institue, Survey no 13, 2nd Floor, Maninee Apartments, Narhe road, Dhayari Gaon, Pune - 411041.

Subject: Purchase order of Anaerobic Digester for food waste(Bio-GAS)

Dear Sir,

With reference to your quotation dated 2/9/2017, We are placing herewith our purchase order of Anaerobic Digester for food waste(Bio-GAS), as per below mentioned specification with terms & conditions description given below.

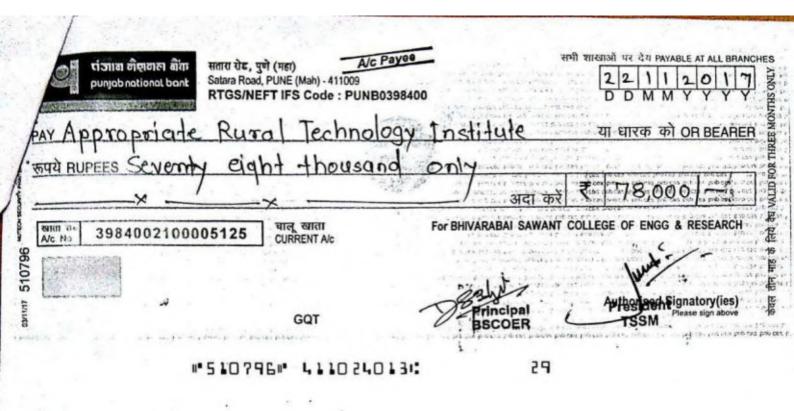
Sr. no	Material Specification	Description	BY ARTI
1	Biogas Unit A. Digester B. Gas holder	HDPE/LLDPE 2000 Lit HDPE/LLDPE 1500 Lit	36,000
2	per hour		15,000
3	Fabricated Guide for Gasholder Support for the gasholder		3,500
4	4 Plumbing Material & accessories PVC pipes, elbow, MTP, FTP etc		5,000
5	Cow dung	Inoculums of biogas bacteria	2,000
6	Biogas Burner	Burner with stand single	3,000
7	Sundry Material	Bucket, mugs, pipes, etc	
8	Manpower		15,000
9	Travel for Experts & Technicians (2 visits)		
10	Contingencies		2,000
11	ARTI Technology Transfer charges		2,500
12	Transport of Material		3,500
13	Institutional Overheads		5,000
-	Grant Total		5,000
word	s: Rs Sixty Five Thousand only		97,500
	CONDITION	And the second second	

TERMS & CONDITION

1. Delivery: - By Hand.

2. Payment: - 80% advance payment & 20% after completion of the project.

TERRENAME Colle ngineering &Research S. No-12/1/2 & 12/2/2, Narha Tal- Haveli, Pune-411 061





TAX INVOICE

(Rule 11 of Central Excise Rule 2002, as amended)

DUPLICATE FOR TRANSPOTER



WTE INFRA PROJECTS PVT. LTD.

SR.No.80, Behind Hotel Prageti, Bhosari-Alandi Road, Wadmukhwadi-Charholi, Pimpri-Chinchwad, Pune-412105. Tet. +91-9822909688 Email: accounts@watertreatmentindia.net



Date: 13.09.2016 Invoice No.: 00265 Our VAT TIN No. 27421148585V ECC No AAECK4133BEM001 Our CST TIN No. 27421148585C Veh No. 6 Range Bhosari Range II Code No. 600904 Desp.from MH14 9M 9688 Bhosari Div-1 PLA No. Transporter: BY HAND Excise Comodity SPARE PART OF W.T. PLANT Nature of Removal : Independent Buyer Vendor Code: NOT Tariff Heading No.: 84219900 Category: Industrial Consumer Date & Time of Preparation 13.09.2016 14.50 Rate of Duty: 12.50% Date & Time of Removal 13.09.2016 15.05 Notif No. WEF 01.03.15 (AS PER BUDGET 2015) 46014 Customer 46014 Consignee JSPM GROUP OF INSTITUTE JSPM GROUP OF INSTITUTE NARHE CAMPUS, PUNE NARHE CAMPUS, PUNE Consignee VAT/CST TIN :/ Cust VAT/CST TIN / Cust ECC No. Con.ECC No. Cust PAN AAATJ3522A Our ORF No. Your PO No. & Date: JSPM/NARHE/PO/2016-17 /Dt. 13.09.2016 02886 Qty & Unit Unit Rate Particulars No. Rs CHEMICAL 3,000 kg CAUSTIC SODA 2 CHEMICAL 3,000 kg 450,000 1350.00 CITRIC ACID Received No. CHEMICAL 520,000 260.00 3 0.500 JSPM Nartie SODIUM LOARY SULPHATE CHEMICAL 1,000 Kg. 600.000 500,00 14/03/14 Date : EDTA CHEMICAL 5 5,000 kg 50.000 250.00 Time: g.obaim HYDROCHLORIC ACID Vehicle How MHO 14-DM seems Vila Atlean Sub Total 3510.00 Less Discoun Remark Packing & Forwarding 0.00 % Rs 0.00 Excise Duty Payable Rs. 439.00 Rs 3510.00 E Duty in words (Rupees Four Hundred Thirty Nine Only) Total Excise Duty @ 12.50 Rs 439.00 Edu. Cess @ 0.00 % on ED Rs 0.00 H&S Cess @ 0.00 % on ED Rs 0.00 Taxable Freight/Transport Rs. 0.00 Invoice Value: (Rupees Four Thousand Four Hundred Forty Three Taxable Amount Rs 3949.00 MVAT @ 12.50% Rs 494.00 Rs. 0.00 Rs 0.00 Freight / Octroi / Insurance Rs. 0.00 Round off Rs. 0.00 Invoice Value Rs. 4443.00 Material received in For WTE INFRA PROJECTS PVT. LTD. if payment of this bill is not received within due date, interest @ 24% P. A will be collected from you in addition good conditio 9 YOUNGESONC to the bill amount. IN-U41000PN2011PTC140129 Receiver's Signature Authorised Signatory

TAX INVOICE

(Rule 11 of Central Excise Rule 2002, as amended)

DUPLICATE FOR TRANSPOTER



WTE INFRA PROJECTS PVT. LTD.

SR.No.60, Behind Hotel Pragati, Bhosari-Alandi Road, Wadmukhwadi-Charholi, Pimpri-Chinchwad, Pune-412105. Tel. +91-9822909688 Email: accounts@watertreatmentindia.net



Dale 17.09.2016 Invoice No.: 00269 Our VAT TIN No. 27421148585V ECC No. AAECK4133BEM001 Our CST TIN No 27421148585C Veh No. -Code No. 600904 Range Bhosari Range II Bhosari Div-1 PLA No. Transporter BY ROAD Nature of Removal : Independent Buyer Excise Comodity SPARE PART OF W.T. PLANT Vender Code NOT Category Industrial Consumer Tariff Heading No.: 84219900 Date & Time of Preparation: 17.09.2016 9.50 Rate of Duty 12.50% 17:09.2016 10.05 Date & Time of Removal Notif No. WEF 01.03.15 (AS PER BUDGET 2015) 46014 46014 Consignee Customer JSPM GROUP OF INSTITUTE JSPM GROUP OF INSTITUTE NARHE CAMPUS, PUNE NARHE CAMPUS, PUNE Consignee VAT/CST TIN / Cust VAT/CST TIN / Con ECC No. Cust PAN AAATJ3522A Cust ECC No Our ORF No 02896 Your PO No & Date jspm/ narhe/po/2016-17 /Dt. 15.09.2016 Unit Rate Amount Qty & Unit ST Rs. Rs. No 85400.00 42700,000 2.000 No. MEMBRANE HYD.RO MEMBRANE BR2 8040 Received Hot-JSPN Narite C Vehicle Not. MH NeD M - 1889
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WTE Infra Projects Pvt. Ltd.



For Water And Waste Water Treatment Systems

TAX INVOICE

(Formerly known as WTS Weler Treatment Equipments Pure)

Operations: Sr No. 80/1, Bhoseri-Alandi Road, Betund Hotel Pragas, Magzine Corner, Wachnukhwadi, Charboli(3), Pimpri Chinchwad, Puris - 412 105.

Contacts: +910793009686, 7350010550 Emell: pak1@walerbreatmentindia.not omkar@waterbreatmentindia.net

Web.: www.waterbreatmentpuris.com CIN - U41000PN2011PTC140129

ORIGINAL

TO JSPM (voice No : 50166 Date : 19.10.2016			
NARHE CAMPUS, PUNE Cust.Code : NOT APP		P.O.No.: JSPM/NARHE/PO/2016-17 P.O.Dt.: 18.10.2016 Disp.Document: BY HAND Our ORF No.: 02990				
Sr.	Particulars	Quantity	Rate	Amount		
No.		Unit		Rs.		
1	SERVICE CHARGES MOTOR REPAIRING CHARGES	1.00 No		6500.0		
2	SERVICE CHARGES PUMP REPAIRING CHARGES	1.00 No	-	5800.00		
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	Manarashtra Sales Tax At 1959 is in force			0.0		
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	regular course of our business.	100000000000000000000000000000000000000	TOTAL	0.0		
100		GRAND	TOTAL	14145.0		

Receiver's Sign. & Remarks



WIE INFRA PROJECTS PVT. LTD.



(A) WHO BOIL - Authorised Signatory

DUPLICATE FOR TRANSPOTER



Disputch Advice by : DARSHANA D

WTE INFRA PROJECTS PVT. LTD.

SR.No.80, Behind Hotel Pragati, Shosan-Alandi Road, Wadmukhwadi-Charholi, Pimpri-Chinchwad, Pune 412105.



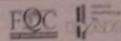
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Cust VAT/CST TIN /		Consignee \	AT/CST TIN:/	-	
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IN-U41000PN2011PTC140129	Receiver's Signature	Association De	W.	A	uthorised Signatory

DUPLICATE FOR TRANSPOTER



WTE INFRA PROJECTS PVT. LTD.

Plot No.PAP-S-77, Chaken Industrial Area, Phase-II



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ate of Duty 12.50%	Date & T	one of Removal	30.12.2018 18	.02
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NARHE CAMPUS.PUNE				
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Your PO No & Date JSPM /NARHE/PO/2016-17 /Dt. 07.1	12.2016	Qty & Unit	Unit Rate	Amount
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3 PUMP ACCESSORIES		1.000 No.	413,000	413.0
DISCHARGE FLN THRD 2" JDS 10				
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Date - 3111 2000 Payable Rs : 113.00		Less Discount Packing & Forw Total Ass. Value	arding 0.00 % F	Name. 411 041 8 8 96.0 8 96.0 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
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If payment of this bill is not received within dur date, interest it 24% P. A. will be collected from you in addition to the bill amount.

CIN-U41000PN2011PTC140129





Authorised Signatory

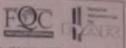
DUPLICATE FOR TRANSPOTER



Cust ECC No.

WTE INFRA PROJECTS PVT. LTD.

Plot No.PAP-S-77, Chakan Industrial Area, Phase-II. Village Savardari, Tal Khed, Dist Pune-410 501



WTE long Projects Pvt. Ltd.	Tel.:+91-9822909688 Em	nail accounts@watertreatmentindia.net	An ISO 3091 : 2556 Carolines Co
Our VAT TIN No : 274211	48585V	Invoice No.: 10154	Date: 28.02.2017
Our OST TIN No. 274211	48585C	ECC No AAECK4133BEM002	

C No AAECK4133BEM002 Range RANGE-IV/CHAKAN-I Code No. 600904 Veh.No. 0 Ow. Division-IV(Chakan-II) PLA No.

Transporter: BY HAND Excise Comodity SPARE PART OF W.T PLANT Nature of Removal: Independent Buyer

Tariff Heading No.: 84219900 Vendor Code : NOT Category Industrial Consumer Rate of Duty 12.50% Date & Time of Preparation : 28.02.2017 18.29

Date & Time of Removal 28.02.2017 18.44 Notif No. WEF 01.03.15 (AS PER BUDGET 2015)

Customer 46014 Consignee 46014

JSPM GROUP OF INSTITUTE JSPM GROUP OF INSTITUTE NARHE CAMPUS PUNE NARHE CAMPUS, PUNE

Cust VAT/CST TIN :/ Consignee VAT/CST TIN /

COSLPAN AAATJ3522A

Your PO No. & Date JSPM/NARHE/PO/2016-17 /Dt. 25.02.2017 Our ORF No. Qty & Unit Unit Rate Amount No. Rs. Rs.

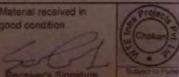
Con.ECC No.





The state of the s	Sub Total	Rs.	8680.00
Rémark :	ess Discount	Rs.	
	Packing & Forwarding 0.00 %	Rs	0.00
Excise Duty Payable Rs. 1086.00	otal Ass. Value	Rs.	8680.00
E Duty in words (Rupees One Thousand Eighty Six Only)	Total Excise Duty @ 12.50	Rs	1086.00
	du. Cess @ 0.00 % on ED	Rs.	0.00
	1&S Cess @ 0.00 % on ED	Rs.	0.00
	axable Freight/Transport	Rs.	0.00
Invoice Value (Rupees Eleven Thousand Eighty Four Only)	Taxable Amount	Rs.	9766.00
	MVAT @ 13.50%	Rs.	1318.00
Comfood that the periodicity given above are true and correct and the amount indicated represents the price enhance thereto and that there is no flow of additional consideration directly or indirectly from the		Rs.	0.00
		Rs	0.00
Visit femily careful that our impatration cereficiate under the Manazastria Value Added Tax. Act 2005 is in more on the date on which that the sale of the goods specified in this Tax Invoice is made by us and that the transferror of sales.		Rs.	0.00
	Round off	Rs.	0.00
the band sales while form of return and the due fair if any payable on the sale has been paid or shall be said	Invoice Value	Rs	11084.00

CIN-U41000PN2011PTC140129



For WTE INFRA PROJECTS PVT. LTD.

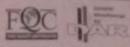


DUPLICATE FOR TRANSPOTER



WTE INFRA PROJECTS PVT. LTD.

Plot No.PAP-S-77, Chakan Industrial Area, Phase-II. Village Savardari, Tal.Khed, Dist.Pune-410 501 Tel. +91-9822909688 Email: accounts@watertreatmentindia.net



An ISO 9001 - 2008 Certified Con

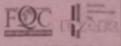
WTE Into Projects Pvt. U.S. Tel. +91-98229090	oo Email . accou	intage water ocus			-
Dur VAT TIN No.: 27421148585V	Inve	pice No. : 101	54	Date	28.02.2017
Our CST TIN No. 27421148585C	ECC	NO AAECK4	133BEM00		
lange RANGE-IV(CHAKAN-I Code No 600904	Des	p.from		Ven.No	0
Div Division-IV(Chakan-II) PLA No	Tran	sporter BY H			
Excise Comodity SPARE PART OF W.T. PLANT	Nati	ire of Removal :	Independen	t Buyer	
ariff Heading No.: 84219900	Cate	gory Industria	of Consum	-	r Code : NOT
Rate of Duty: 12.50%				02.2017 18.2	
Notif No. WEF 01.03.15 (AS PER BUDGET 2015	Date	& Time of Rem	oval 28.	02.2017 18.4	4
Customer		signee :			46014
JSPM GROUP OF INSTITUTE		M GROUP OF IN	STITUTE		
NARHE CAMPUS PUNE	NAR	HE CAMPUS,PL	INE		
The second secon	1				
Cust VAT/CST TIN:/	A 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	signee VAT/CST	TIN		
Cust ECC No.: Cust PAN AAAT.	200000	ECC No.		Our ORF N	0. 03330
Your PO No. & Date: JSPM/NARHE/PO/2016-17 /E	ot. 25.02.2017	1 60 24		Unit Rate	Amount
Sr. Particulars		Qty & Unit		Rs.	Rs
No.			V	385.000	770.00
1 CHEMICAL		2.000	kg	303.000	775.00
CAUSTIC SODA		2.000	kg	350.000	700.00
2 CHEMICAL		2.000	Kg.	250.000	14000
CITRIC ACID		2.000	kg	50.000	100.00
3 CHEMICAL	-	2.000	79	-	
HYDROCHLORIC ACID		1.000	kg	520.000	520.00
4 CHEMICAL	-	1.000	1.00	200000	1000
SODIUM LOARY SULPHATE	1dr	1,000	Kg.	600.000	600.00
5 CHEMICAL	1995		1000		
LUIA	1	4.000	No.	800.000	3200.00
4X20	citosit	+			10000
		5.000	Ltr.	550,000	2750.00
ANTISCALENT A - 101 SI	B. K. K. An				
	10041-10	or A			
	Mark The Control of t	1007100		D.	
	TAZT	Sub Tota		Rs	
Remark		Less Disc		Rs	
37	1 211		Forwarding		
Excise Duty Payable Rs. 1	TO SHATE	/ / Total Ass		Rs	
E. Duty in words:		The second secon	ise Duty @	STATE OF THE PERSON NAMED IN	
	7	The second second second	s @ 0.00 %	The second second second	
			s @ 0.00 %	The second name of the second	SSM's
			reight/Trans		2
Invoice Value :		The state of the s	le Amount	Rs	Narhe. Pune - 411 041
			@ 13.50%	Rs.	Name: 411 041
Certified that the particulars given above are true and correct and the at price actually charged and that there is no flow of additional consideration	n directly or indirectly	y from the		Rs.	College of Engl
DU yeld				100000	
We hereby certify that our registration certificate under the Maharashtrat V terce on the date on which that the sale of the gloods specified in this Tax	ENVEYOR IS ITTABLE DV. U		No.	/ Insurance Rs.	
the transaction of sales covered by this Tax broken has been affected by use turnover of sales while filing of naturn and this due tax if any payable of	s and it shall be account the sale has been pa	inted for in Round		pice Value Rs	
te pad			Inv	NFRA PROJECT	S PVT. LTD.
Payment Terms: Material received good condition	id in	10/00%	FORWIE	MI TEAT PROSECUL	The same of the sa
wehin due date, interest @ 24% P. A	2, (36	nakan E		00=	2.00
will be collected from you in addition	1 1	151		COUNT	(DECILO)
to the bill priciant	L X	•		Auth	orised Signatory
CIN-U41000PN2011PTC140129 Receiver's Sig	nature Supp	Action Crity			ued on next page
Insputch Advice by · DARSHANA D				Contin	And the second second

DUPLICATE FOR TRANSPOTER



WTE INFRA PROJECTS PVT. LTD.

Plot No.PAP-S-77, Chakan Industrial Area, Phase-II, Village Savardan, Tal.Khed, Dist.Pune-410 501



Tel:+91-9522909688 Email: accounts@watertreatmentind.a.net

Our VAT TIN No.: 27421148585V	Invoice No. : 10162 Date 03.03.2017			
Our CST TIN No.: 27421148585C	ECC No. AAECK4133BEM002			
Range RANGE-IV(CHAKAN-I Code No 600904 Div. Division-IV(Chakan-II) PLA No	Desp from Veh No. 0 Transporter BY HAND			
Excise Comodity: SPARE PART OF W.T. PLANT Tariff Heading No.: 84219900	Nature of Removal Independent Buyer Category Industrial Consumer Vendor Code NOT			
Rate of Duty 12.50% Notif. No. WEF 01.03.15 (AS PER BUDGET 2015)	Date & Time of Preparation 03.03.2017 17.18 Date & Time of Removal : 03.03.2017 17.33			
	Consignee 46014 JSPM GROUP OF INSTITUTE NARHE CAMPUS, PUNE			

Consignee VAT/CST TIN 7 CUST. VAT/CST TIN /

Con ECC No Cust PAN AAATJ3522A Cust ECC No. Our ORF No 03330 Your PO No. & Date JSPM/NARHE/PO/2016-17 /Dt. 25.02.2017 Unit Rate Qty & Unit

Rs 3500.00 1.000 No. 3500.000 MULTI PORT VALVE 25 NB FILTER TOP MOUTED

1844



		Sub Total	Rs.	3500,00
Remark		Less Discount	Rs	
		Packing & Forwarding 0.00 %	Rs.	0.00
Excise Duty Payable Rs	438.00	Total Ass. Value	Rs.	3500.00
E Duty in words (Rupees Four Hundred Thirty Eight Only)		Total Excise Duty @ 12.50	Rs	438.00
		Edu. Cess @ 0.00 % on ED	Rs	0.00
		H&S Cess @ 0.00 % on ED	Rs	0.00
		Taxable Freight/Transport	Rs	0.00
Invoice Value (Rupees Four Thousand Four Hundred Seventy Only)		Taxable Amount	Rs.	3938.00
		MVAT @ 13.50%	Rs.	532.00
Collect the the particular gives above the true and control and the amount indicated impresents the price active, the past and that there is no flowest additional optopoleration identity or indicately from the buyer.		ris, tre	Rs.	0.00
		See The	Rs:	0.00
We have, settly her our requision continue, under the Manaranna value Active Tax Act 2000 is in Account to the post specifier or the Invited to make the unit of the Invited to the Invite		e Rs	0.00	
		aby in Pound off	Rs	0.00
		Invoice Value	RS.	4470.00
Payment Terms payment of this bill is not recovered	Material received in	For WTE INFRA PR	OJECTS F	VT. LTD
office Cure SMs, interest in the p. A. of the contented from you in addition	gond condition		Turo	SAG
the bit amount	1	7	-	

