

ESSFOUR ENGINEERING Private Limited



TECHNICAL BROCHURE

Mission Statement



- We Essfour Engineering Private Limited would strive to be the preferred agency for all repairs related to the marine industry.
- We shall achieve our objective by consistently delivering our service
 - ✦ On time every time
 - ✦ By fulfilling or exceeding customer requirements relating to quality and Safety.
 - ✦ By ensuring fair returns to all stakeholders viz: customer, employees, subcontractors and promoters.

DIRECTORS



- Anuradha Thakur: 39 years. Commerce graduate with 12 years experience in the marine industry.
- Amit Kumar : 42 years. Electrical Engineer with 17 years experience in the marine industry.

PROJECTS EXECUTED



- Turnkey repairs – Afloat as well as Drydocking repairs of ships.
- Project management
- New construction of ships
- Living quarters fit-out works
- Design of ships and Floating structures
- Engineering support in design and construction of specialist marine equipment
- Consultancy work

SPOOLING WINCH

- SPOOLING WINCH



- Design, manufacture and supply of spooling winch capable of spooling hoist wire of 900T Huisman Crane under pre-tension of 15 tonnes.
- Spooling of the Crane wire.
- Customer : Essar Subsea

REPAIRS OF SAMUDRA PRAHARI

- Mechanical, electrical, piping and structural outfit repairs on Indian Coast Guard vessel Samudra Prahari consisting of the following:
 - Overhaul of 4 Electro Hydraulic cranes.
 - Overhaul of hydraulic windlass and capstans.
- Removal / refit of 900 m piping of various sizes.
- Overhaul of 400 valves of various sizes
- Overhaul of 35 centrifugal, gear and screw pumps
- Overhaul of 180 electrical motors from 0.5 HP to 120 HP.
- Overhaul of Switchboard and switchgears.
- All Hull outfit jobs
- Servicing of Helo Hangar system including Landing grid



REPAIRS ON SUCHETA KRIPALANI



- **Electro mechanical repairs of Indian Coast Guard vessel Sucheta Kripalani:**
 - Overhaul of 36 motors
 - Overhaul of 15 pumps
 - Overhaul of 100 valves and removal/pressure testing of 500 m pipes.
 - Overhaul of MSB, and switchgears
 - Overhaul of 3 Nos. Alternators 100 KVA capacity.
 - Renewal of 100 sqm aluminium chequered plating in Machinery room

REPAIRS ON JINDAL KAMAKSHI



- Repairs to Rudder and Rudder stock of vessel under Class inspection.
- Repairs to 15 nos. Centrifugal pumps
- Overhaul of 24 electrical motors
- Overhaul of Main Engine 4 stroke 3000 HP Yanmar.
- Overhaul of sea valves and Boiler mountings : 60 valves in total.

REPAIRS ON INS JYOTI



- Repairs and reconditioning of 33 Nos. Centrifugal pumps on Replenishment tanker INS JYOTI.
- Job included casting and renewal of 15 Bronze impellers, design and manufacture of 33 mechanical seals (indigenisation of spares)
- Manufacture of 12 SS shaft
- Dynamic balancing of shafts and impeller assembly.
- Performance test of pumps in the shop to full rated capacity.

REPAIRS TO HARBOUR TUGS



- Drydocking repairs of about 10 Nos. Harbour tugs covering all aspects of repair except painting.
- Repairs to Towing winch of Ocean Tug SIGMA belonging to Ocean Sparkle.
- Overhaul of Schottel and Aquamaster thrusters of tugs under service engineers guidance.
- Repairs to Kort Nozzle of Tug Dignity.
- Steel and piping repairs on Harbour Tug KB-10.

INS BANGARAM AND BATTIMALV



- Full refit of INS Fast patrol vessels INS Bangaram and Battimalv each consisting of
 - 50 electric motors
 - 20 pumps
 - 400 valves overhaul and pressure test
 - 750 m of pipes to remove pressure test and refit
 - 10 tonnes of steel renewal (DMR 249A plates)
 - Hull outfit item repairs
 - Deck machinery overhaul

REPAIRS TO SHAFT SLEEVE OF SUBMARINE



Job description

- In situ machine was designed after preparing a mock-up that simulated the space inside a submarine.
- The machine was transported to site and shaft sleeve was machined, a spigoted shaft sleeve in two halves were inserted, secured by grub screws, welded and finish machined to size within 0.02 mm tolerance on the diameter.
- Entire job completed in 24 continuous shifts without any break.

Machined groove



LAUNCHING OF FLOATING DOCK

- Essfour carried out the Launching of a Floating Dock of size 80m x 24m x 9.2m
- Weight 1400 tonnes
- Launching carried out in a greenfield shipyard on natural unprepared ground.



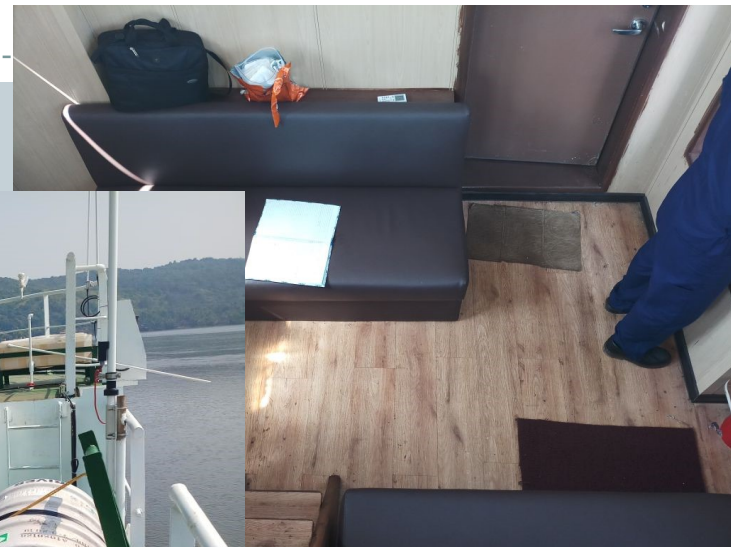
New Build vessel SURVEY LAUNCH



- Project Management including detail engineering, procurement management and construction of 22 m SURVEY LAUNCH for SADHAV SHIPPING.



Survey cum Pilot Launch



Survey cum Pilot Launch



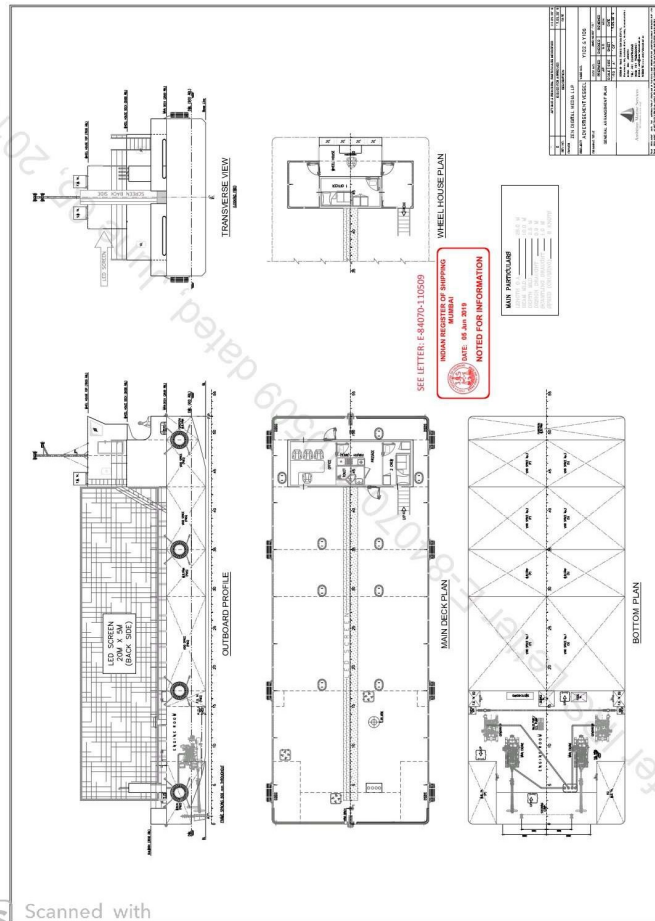
- Length : 24.5 Mtr
- Breadth : 5.5 Mtr
- Depth : 3.0Mtr
- Draft: 1.5Mtr
- Propulsion: 2x500BHP
- Speed: 12Knots
- Type: RSV –IV
- Class: IRS
- Order value: \$6,90,000

CONVERSION TO RSV-II OIL TANKER



- Length : 69.8 Mtr
- Beam : 13.4 Mtr
- Depth : 4.45 Mtr
- Draught(Loaded):
3.2 Mtr
- Cargo Oil Capacity: 1700
Ton
- Order value: \$4,00,000

CONSTRUCTION OF ADVERTISEMENT VESSEL-02 No's



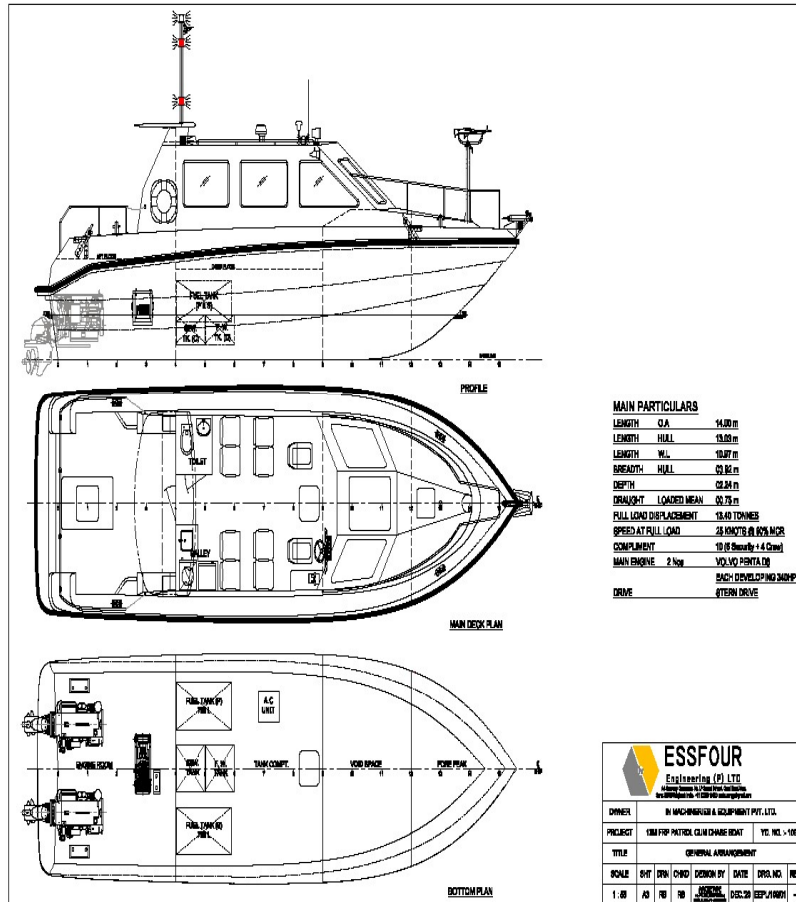
CS Scanned with
CamScanner

- Length : 26.0 Mtr
- Beam : 10.0 Mtr
- Depth : 2.5 Mtr
- Draught : 0.9 Mtr
- First of it's kind in India
- Class : IRS
- Contract Value :
\$7,42,857

ADVERTISEMENT VESSEL



CONSTRUCTION OF FRP PATROL CUM CHASE BOAT



MAIN PARTICULARS

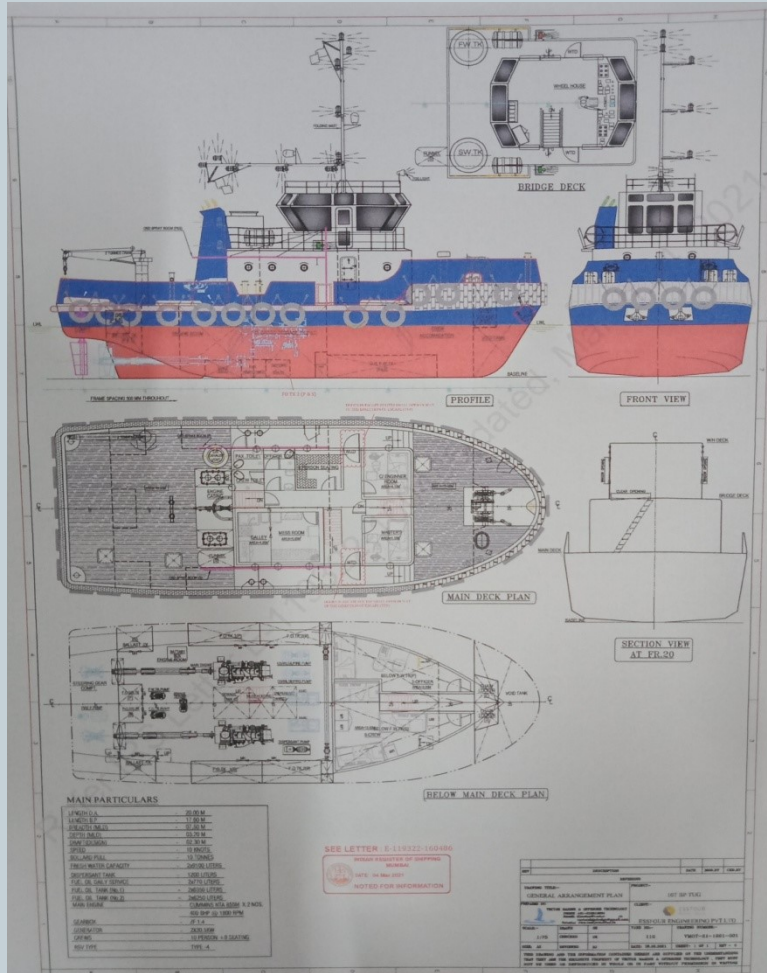
LENGTH O/A	14.00 m
LENGTH HULL	13.00 m
LENGTH W/L	10.00 m
BREADTH HULL	03.92 m
DEPTH	02.24 m
DRAUGHT LOADED MEAN	00.75 m
FULL LOAD DISPLACEMENT	13.40 TONNES
SPEED AT FULL LOAD	24 KNOTS @ 60% RPM
COMPLIMENT	10 (8 Seater) + 4 Crew
MAIN ENGINE	2 No. VOLVO PENTA D6
DRIVE	BACH DEVELOPING SHIP STERN DRIVE

ESSFOUR
Engineering (P) LTD
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

OWNER	B1 MARINEWORK & EQUIPMENT PVT. LTD.						
PROJECT	15M FRP PATROL CUM CHASE BOAT YC. NO. 100						
TITLE	GENERAL ARRANGEMENT						
SCALE	SYT	DRW	CHD	DESIGN BY	DATE	DRG. NO.	REV.
1:50	AS	FD	FD	ESSFOUR	DEC.20 (DEP. PLAN)	-	-

- Length : 14.0 Mtr
- Beam : 3.92 Mtr
- Depth : 2.24 Mtr
- Draught : 0.75 Mtr
- Class : RINA
- Contract Value : \$2,64,285

CONSTRUCTION OF TUG RSV TYPE IV



- Length : 20.0 Mtr
- Beam : 7.50 Mtr
- Depth : 3.20 Mtr
- Draught : 2.3 Mtr
- Class : IRS
- Contract Value :
\$6,18,571

REPAIR AT OMAN



- **OUR CLIENT:**

A). KHIMJI RAMDAS

B). OMAN DRYDOCK COMPANY



रिवर एडमिरल नारायण प्रसाद, एन एम
Rear Admiral Narayan Prasad, NM
एडमिरल अधीक्षक

Admiral Superintendent
Tele 0891-2577175 (Off)
0891-2577678 (Res)
7799749100 (Mob)
Email ericasd_navy@nic.in

DO-242/NP

Mr S Krishna Kumar
Managing Director
M/s Essfour Engineering Pvt Ltd.
A4, Gateway Commune,
Canal Road, Vesu
Surat - 395 007

Sear S Krishna Kumar,

1. I am writing this in connection with the commendable work undertaken by M/s Essfour Engineering Pvt Ltd, while executing in-situ repairs on the propeller shaft sleeve of a vessel of national importance.
2. While the project had many unknowns and varying challenges from the very onset, the professional commitment displayed by your firm in partnering the Indian Navy in meeting this challenge, has been of a very high order. The proposed repair methodology substantiated through a mock up as proof of concept, singularly enabled timely resolution of the defect.
3. Every stage of work execution was dwelled upon in detail, with intangibles being overcome promptly. A large measure of the credit for the timely execution of the project can be attributed to the hands-on work undertaken by Mr. BS Patro and on-site coordination by Mr Amit Kumar. Their continuous presence on-site and ability to foresee issues enabled overcoming constraints that could have otherwise jeopardised project execution.
4. I also take this opportunity to commend the excellent work by your technical partner, Mr Asif Shah of M/s Radhika Technologies Pvt. Ltd. in designing and developing a machine capable of in-situ repair, within the constraints of space. His valuable inputs at different stages of repair, from setting up of the mock-up to the final execution, is highly appreciated.
5. The time bound completion of the project, strengthens the belief that given the opportunity, Indian Industry is capable of rising to any challenge, bolstering our Prime Minister's vision of 'Make in India'. We look forward to your firm partnering with the Indian Navy with similar enthusiasm, in the coming years.

With warm regards,

Yours sincerely

Sear S Krishna Kumar


नौसेना गोदौनार
Naval Dockyard
विशाखापत्तणम-530 014
Visakhapatnam-530 014

05 Dec 16

APPRECIATION LETTER FROM INDIAN NAVY

REGISTRATION WITH INDIAN COAST GUARD




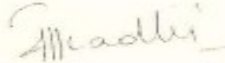

INDIAN COAST GUARD REGION (NORTH EAST)
KOLKATA

CERTIFICATE OF REGISTRATION AS "REPAIRER & SUPPLIER"

1. This is to certify that M/s ESSFOUR Engg. Pvt. Ltd, Paradip has been registered as **Grade-I** Supplier vide registration certificate No. 3536/Vendor/RHQ(NE)/16/I/DHQ - 7 dated 02 Aug 2016 for undertaking repair of hull, Engineering and Electrical machinery/equipment and supply of machinery spares for Indian Coast Guard units/ships.

2. The certificate of registration shall remain valid for a period of two years from the date of issue (conditions of registration overleaf)




(MK Padhi)
Dy Inspector General
Chief Staff Officer (Tech)
for Commander
Indian Coast Guard Region (NE)

Date : 02 Aug 2016

TURNOVER IN LAST 2 YEARS



Turnover

- 2018-2019 :
- 2019-2020 :
\$5,51,428
- 2020-2021 :
Rs. \$6,42,857

Registration details

- CIN Number :
U17120GJ2013PTC075155
- PAN Number :
AATCS0814Q
- GST
No.:**24AATCS0814Q1ZS**

Thank you