

CASE HISTORY

Rev:01, Date : 07.08.2020

USE OF PAVING FABRIC FOR THE STRENGTHENING AND IMPROVEMENT OF MARINE DRIVE FROM NCPA TO TAMBE CHOWK, MUMBAI, MAHARASHTRA

MUMBAI, MAHARASHTRA, INDIA



Pavement Protection

Client:	Products used:
MUNICIPAL CORPORATION OF GREATER MUMBAI	TECHPAVE-C040
Main contractor:	Quantity supplied:
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	

Approach Length - 4kms, From NCPA to Tambe Chowk (Marine Drive)

Approach Width - 24m

Project brief & Challenges:

The existing road from NCPA to Tambe Chowk (Marine Line to Charni Road)) were full of undulations, refractive cracking & pot hole problems. So it is required to strengthen & resurface the 24mts wide road, for a stretch of about 4kms along with the beautification of central median in Mumbai. The major problem is that it's a high profile road which connects to Mantralaya, Vidhan Bhawan, Nariman Point with the flowing traffic.

Now a day's asphalt resurfacing encountered with the major problem of propagation of existing crocodile cracks from old or existing pavements. That is because of the shear and tensile stresses induced by the continuous movement of traffic loads, change in temperature, swelling of sub grade due to oozing of moisture through hair cracks. Load induced vertical movements leading to shear stresses in the overlay also contribute to reflective cracking. Reflective cracking in the overlay allows water to percolate into pavement structure and weaken subbase, and contributes too many forms of pavement deterioration, including increased roughness, swelling, spalling etc.

Techfab (India) Industries Ltd submitted a proposal with solution of using, TechPave as an interlayer system, well known as the Paving Fabric, which act as a moisture barrier between the existing and new overlay and prevent the propagation of cracks further.



Spraying of Bitumen – Before TechPave

Solution:

TechFab India's Paving Fabric (Techpave-C040) is used as moisture absorbing interlayer membrane for 24mts wide road. Because it is a high profile road and we can't stop or divert traffic therefore, we decide to execute the whole project in a small stretch of 2-4m width.



Milling Operation – Before Installation



Surface Preparation Before Laying TechPave



Installation of TechPave

Benefits of TechFab India's Paving Fabric (TechPave):

1. Confirming IRC / MORT&H Specification for Paving Fabric
2. TechPave is having very good Asphalt Retention and act as a stress absorption, bonding & sealing interlayer between old & new pavement layer which is the prime requirement for this project.
3. One of the best, quick and economical solution to protect pavement surface against moisture penetration and hair cracks.



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BTRA TEST LABORATORIES

TEST REPORT

Details: BTU/TW TTG-457/2016 DTD: 10.05.2016

Sample: PAVING FABRIC

Code: 1759/TTG/01

No. of Samples: ONE

Total Pages: 1 OF 2

Despatched on:

REF: M/s. MUNICIPAL CORPORATION OF GREATER MUMBAI
Office of Dy. Ch. E. (Roads) City, 1st Floor, Kanar CHSL, Opp.
Pathe Bazar, Grant Road, (E), Mumbai 400 007

REF No.: Dy. Ch. Eng. /Roads/City DTD: NIL

ed on: DTD: 02.02.2016

f performance of Test: 02.02.2016 TO 14.03.2016

TEST RESULTS

SAMPLE NO.	SAMPLE MARK	WE OF MANUFACTURER	DESCRIPTION OF
1759/TTG/01			
			Pavement Overlay Fabric
			RW-11-03
			Techfab (India) Industries Ltd.
			AC-108 : Strengthening and Improvement of Marine Drive from NCPA to Tambe Chowk (i.e. D. Tata Road, N.S. Road and Dr. N.A. Purandare Marg) in Mechanized Mastic Asphalt and Cement Concrete along with Beautification of Central Median in 'A', 'C' & 'D' Ward City Division
			Laying Paving Fabric Beneath a Pavement Overlay (Providing and laying paving fabric with physical requirements as per Table 704-2 (MoRTH) over a tack coat of paving grade Bitumen 80-100 penetration, laid at the rate of 1 kg per sqm over thoroughly cleaned and repaired surface to provide a water resistant membrane and crack retarding layer. Paving fabric to be free of wrinkling and folding and to be laid before cooling of tack coat, brooming and rolling of surface with pneumatic roller to maximise paving fabric contact with pavement surface)

SER. NO.	TEST PARAMETERS	RESULTS	METHOD OF TEST
1.	Asphalt Retention, (kg/m ²)	1.33	ASTM D: 6140-2014
	Direction 1	1.13	
	Direction 2	1.204	by OSC
2.	Melting Point, (°C)	Heat Bonded on one side only	Visual Inspection
3.	Surface Texture		

Samples were drawn by the Laboratory.
The test results relate only to the item tested.
This report shall not be used for litigation or publicity.
VAL SERVICES OF BTRA FOR TOTAL SOLUTIONS.

Test Result from BTRA

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