

## 4<sup>th</sup> April-DNA, Mumbai Edition



### **'THE RESPONSE TIME WILL FURTHER IMPROVE SOON'**

**Subodh Kumar, Commissioner, MCGM, explains how the Mumbai Fire Brigade's role has expanded and the initiatives taken to manage this transformation to Vijay Pandya**



**As Mumbai Fire Brigade enters its 125th year of service, how has it evolved over this duration?**

The Bombay Fire Brigade came into existence in 1803 after the great fire of Mumbai of 1803 but was then unorganized. Initially Fire Brigade was using horse driven fire engines under the control of Commissioner of Police. On 1st April, 1887, the Fire brigade activities were fully handed over to Municipal Corporation and had the distinction of being the first organized municipal fire service in the country. Mumbai Fire Brigade has over the years evolved from a horse and cart driven service to a most specialised fire service equipped with 56 fire engines, 21 jumbo tankers, 18 specialised appliances including 6 hydraulic platforms and state of art appliances and equipment.

**How do you envisage the role of Fire Brigade in the present context of Mumbai as a city of skyscrapers, extreme population density and growing traffic?**

The important parameter to rate the efficiency of fire services is response time. The Standing Fire Advisory committee of Government of India recommends a response time of 15-20 minutes in urban areas. In Mumbai, the response time is 10 minutes in the city and 20 minutes in the suburbs. Of course, this is much lesser during the night and also exceeds when there is peak hour traffic and in extreme traffic conditions. We are trying to address response time by setting up three more fire stations in the city. Currently there are 33 fire stations, 6 regional command centres at Byculla, Wadala, Vikhroli, Mankhurd, Marol and Borivali. Response time will further improve when transport projects easing traffic conditions in Mumbai are implemented.

**How has the role of Mumbai Fire Brigade expanded?**

The Mumbai Fire Brigade's role had started with fire fighting and rescue of life and property. However, over a period of time it expanded and now Mumbai Fire Brigade attends to search and rescue operations during house collapses, rescue operations during floods, looking after beach safety, oil spills, petrochemical fires, road-rail-aircraft accidents, etc. It has been properly equipped for all these functions. They have 5 specialised rescue vans provided for search and rescue operations, which have thermal imaging cameras, search cameras and vans with equipment for breaking, breaching and cutting the concrete. Additional thermal image cameras have also been provided. Mumbai Fire Brigade is also equipped with 29 ambulances including 6 cardiac ambulances, which have all types of emergency treatment equipment such as ventilators, defibrillators, ECG, etc. along with doctors. Other ambulances have basic life support facilities such as oxygen, first aid, spine board, splints, etc. To deal with floods, there are 6 flood rescue units with about 170 trained men located at six different locations. Each unit also has a rescue boat and other flood rescue equipment. For beach safety, Mumbai Fire Brigade has 6 beach safety units with adequate lifeguards along with necessary equipment such as safety jackets, rescue tools, etc. It also deals with chemical disasters and has the capability of sealing chemical leaks.

Since there are no hydrants in the suburbs, how does Mumbai Fire Brigade source water for fire-fighting? Mumbai Fire Brigade is equipped with 32 water tankers including 21 Jumbo tankers. They have various filling points across the city, which are used to fill them and replenish water for fire fighting.

### **Is the fire fighting equipment of standard quality?**

The BMC has adhered to International standards while providing personal protection equipment to the firemen. Plus, 495 sets of breathing apparatus are available with the Mumbai Fire Brigade. These are kept in all fire stations and each team has two sets. In addition, specialised breathing apparatus vans have been kept at three locations where breathing apparatus is stocked for quick and easy access as required.

### **What is the training provided to update the skills of firemen?**

Officers and Firemen are given intensive training of 6 months on joining the Mumbai Fire Brigade. Courses of 3 months and 1 month are also provided at the time of their promotion. Most importantly, there is a parade and drill of 1 1/2 hours each day in which different drills are conducted on different days to upgrade the skills of firemen on a daily basis. Finally, whenever any new equipment is provided for Mumbai Fire Brigade each and every fireman is trained in its usage. Officers too are provided comprehensive training of 6 months each when they become Assistant Divisional Fire Officers or Divisional Fire Officers. These trainings are provided as specialised courses at National and International Fire Service colleges.

### **How is Mumbai Fire Brigade increasing awareness among citizens?**

Mumbai Fire Brigade conducts mock drills in high rise buildings and institutions like BPCL, RBI, BARC, etc. It also conducts mock drills at some societies, schools, hospitals, etc. to spread awareness on fire safety. Since this is the 125th year of Mumbai Fire Brigade, a fire safety awareness campaign is proposed to be launched in a big way. We plan to use banners, hoardings, etc. in the city to display the safety precautions, which can be taken by any person to safeguard against most frequent causes of fire.

### **What are the norms in the revised DC rules regarding fire safety?**

Given that Mumbai has no option but to grow vertically, there are buildings that have touched 300 metres. World over, fire fighting through tenders, ladders and snorkels is limited up to 100 metres. Above that one has to design in-building solutions for fire detection and fire fighting. In the new DC rules, it is endeavoured to make this strengthened further. There has to be a fire safe floor at 70-metre intervals in the building. This will check the vertical spread of fire. It is made mandatory to have 'self rescue devices' above 70 metres so that residents can rescue themselves without waiting for fire brigade services.

## **What special measures does Mumbai Fire Brigade undertake to ensure that public places are fire safe?**

Mumbai Fire Brigade has undertaken yearly inspections of various public places such as markets, malls, multiplexes, hospitals and schools. Strict fire safety measures have been envisaged at these public places as per the provisions of Fire Act 2006. Regular inspections have been undertaken at these public places. Also regular mock drills and evacuation drills are organized to make people more aware about fire safety.

## **‘FIRE FIGHTERS HAVE PLAYED A MAJOR ROLE IN RESTORING NORMALCY DURING EMERGENCIES’**

**Sunil Prabhu, Hon. Mayor, Mumbai, shares insights on the significance of the Mumbai Fire Brigade given the serious hazards Mumbai faces being an island city with vertical growth, and his message for its 125th Anniversary**



### **What is the significance of the Fire Brigade for a city like Mumbai?**

I am a Mumbaikar. Having been born and brought up in Mumbai, I have seen the city fight and overcome several manmade disasters, be it the communal riots of 1993, the floods of July 26, 2005 or the more recent 26/11 terrorist attacks.

What stood out in all these disasters was the role of the Mumbai Fire Brigade in saving the lives and properties of Mumbaikars. Fire fighters have played a major role in restoring normalcy during emergencies like house collapses, tree collapses and rescue services. As the Mayor of Mumbai I was witness to the ground realities of rescue operations when fire broke out at Ganpat Vita Sadan building in Tardeo on March 15th. The firemen and officers did every bit to contain the fire and they ensured that precious lives were saved. It reassured me about the services of the Mumbai Fire Brigade for the safety of Mumbaikars.

**What are some of the serious fire hazards that Mumbai faces as an island city?**

As you know, the geographical condition of Mumbai Island City is such that there are natural limitations on the horizontal growth. As the financial capital of India, growth is inevitable and the only option is vertical growth. A major chunk of the population still resides in slums and that is where the major fire hazards occur.

**Given the growth of high rises, do you feel there needs to be a greater emphasis on fire safety?**

Yes, definitely. Fires in high rise buildings are very different and difficult to tackle. But if in-built fire fighting systems and installations are maintained and kept in good working conditions then it becomes easier to control fire in its early stages. Not just residential buildings, commercial offices, industries, public assembly places like malls, cinema houses etc need to strictly adhere to fire safety norms so that the consequences of the fire can be minimized.

**What advice would you like to give the citizens of Mumbai as far as fire safety is concerned?**

We know that the consequences of the fire are loss of life and property, which are the two most precious things of human beings. Subsequently the other consequences are unemployment, loss of books of accounts and records, loss of skilled workers, shortage of commodities and price increase.

Hence I advice the citizens of Mumbai to follow the fire safety norms strictly and keep all the fire systems, extinguishers and other installations in proper working condition. I also request the citizens of Mumbai to co operate and help the fire brigade at the scene of incident so that they can control the fire or other emergencies quickly.

**Mumbai Fire Brigade is commemorating its 125th anniversary, is there any message that you would want to share on this occasion?**

Here I recall the March 15, 2012 fire incident at Ganpat Vita Sadan, Tardeo. After becoming the Mayor of Mumbai I had visited the incident site. The entire wooden building was destroyed due to the fire. The fire fighters successfully rescued the people and controlled the fire. While we were discussing the rehabilitation process for the victims with the municipal and fire brigade officers, a portion of the building collapsed. The fire fighters were seen rescuing people even though the structure was in a precarious condition. I am proud to learn that the Mumbai Fire Brigade is completing 125 years of dedicated service. On this important occasion I wish to convey my greetings and good wishes to all the officers and men of the Mumbai Fire Brigade and their families and wish them every success in the months and years to come.

**Traditional role has extended considerably**

**From basic fire fighting to ensuring beach safety and assisting during natural disasters taking place across the country, the expanding range of responsibilities is evident**



Mumbai Fire Brigade has developed over the years from its traditional role of putting out fires and rescuing people and property. It now also has a role to play in relation to handling natural and complex emergencies, satirical planning for the response in case of major disasters. From the Taj terrorist attacks to the floods in Mumbai and Bihar, Mumbai Fire Brigade has been at the forefront of such situations.

The fire fighters are trained for multi hazard response ranging from basic fires and explosions to floods, major house collapses, aircraft accidents, hazardous materials and chemical leakages incidents, major medical emergencies, mass casualty incidents, severe thunderstorms, hurricanes, train derailments, terrorist attacks, onshore and offshore ship fire, oil spillages, landslides, sea rescue and animal rescue. With such an extensive coastline and so many beaches, they play an important role in beach safety as well.

From having a nuclear power station to large petrochemical refineries, national and international airport and seaport right in the heart of the city has also created very serious fire hazards. Being an island city there is little scope for horizontal development, hence it takes place in vertical direction in the form of high-rise buildings. As the city boasts of maximum number of high-rise buildings, tall high-rise structures above 60 meter pose a greater challenge to city fire department. Over the decades, Mumbai Fire Brigade has augmented its systems and capabilities to tackle this as well.

The Mumbai Fire Brigade has 33 Fire Stations, with city headquarters located at Byculla and suburban headquarters located at Marol. Scientific evaluation of manpower, infrastructure and resources has been made for proper safety and response coverage. Decentralization is taking place with the city of Mumbai now being divided into 6 Regional Command Centres. Each region is headed by a Dy. C.F.O. who will be commanding in their own region. Each region will be provided with all infrastructure required for their respective region to carry out the operational and administrative duties in consideration to the land base use of that particular region and response time. In terms of leveraging technology, software for computerization and networking is already developed by identification of areas to be computerized for effective field work of the Brigade. Stages of computerization includes study of software requirement solution, software designing, customization, data integration, is already completed. Procurement of hardware for networking is already in process and ERP for Brigade will be implemented very soon. In addition to the VHF network high band side with Mumbai fire brigade the proposal is under preparation for having dedicated communication. MCGM under its "Program on Enhancement of Emergency Response (PEER)" has formed a 'Search & Rescue' team on January 26, 2003. The overall goal of the formation of the Search & Rescue team is to increase the survival rates of disaster victims and achieve a satisfactory multi-disciplinary response to any disaster. Specialized services of Mumbai Fire Brigade include Ambulance services with Emergency Medical System. Medical First responders are trained for effective field preparedness in case of day to day emergencies as well as of any disaster. The Mumbai Fire Brigade Disaster Plan in conjunction with the Disaster Management Plan of the Office of Disaster Management, MCGM, is designed to provide a fundamental document outlining the Department's response to a wide range of emergency situations. It is intended to provide a single basic operational plan, which may be expanded to meet any disaster situation regardless of whether the cause is manmade or by natural forces.

## A SLICE OF HISTORY

### A look at the origins and gradual evolution of Mumbai Fire Brigade



After starting off as a part-time function of Police under the Government, the fire protection subject passed on to the Municipality on 1st April 1887 as a full-time subject. An Officer on deputation from the London Fire Brigade in the year 1890 -1947 commanded the brigade. Since 1948, the brigade is completely manned and controlled by Indians.

In the ancient days, the equipment comprised hand pumps and steam engines drawn by horses. The colloquial word 'Bamba' for steam engine is associated ever since the Brigade came into existence. Even today also a fire station is called as 'Bamba Khana.'

The Great Bombay Dock Explosions of 14th April 1944 has become an inalienable part of the history of the Brigade and also that of the City of Bombay. A fire occurred in a ship S.S. "Fort Stikins" berthed at No.1, Victoria Docks. A series of severe explosions occurred. The entire Dock area and neighbouring civilian areas for more than a mile were in flames. The fire-fighting operations continued for over a month. The legendary importance of this tragedy lies in the supreme sacrifice of 66 heroic officers and men, who laid down their lives at the altar of duty and established a glorious heritage for the Brigade. Many more were disabled for life and a large number of fire appliances and equipment were either destroyed or damaged. In recognition, the citizens of Bombay erected a Memorial Column at the Fire Brigade Headquarters, Byculla and the Government of India. Honours and Awards



Besides being the oldest and leading Fire Service in the country, Mumbai Fire Brigade has always been ahead of other fire services in the country, in the matter of receiving National Honours and Awards also. "King Police Medal for Meritorious Service and Bar to this Medal (pre-independence period)" was first awarded to an officer of this Brigade in the country. "President's Fire Service Medal for Gallantry", the highest honour of the nation was first awarded to officers and men of the Brigade (1977). Similarly, an officer of the Brigade from Maharashtra State was awarded "Fire Service Medal for Meritorious Service" by the President of India (1976).

The officers and men of the Brigade are the recipients of all the National Honours and Awards instituted for Fire Service Personnel. The Brigade has the proud record of winning maximum number of Medals among the Metropolitan Fire Services in the Country.



### Leadership

In the context of Indian Fire Services the Brigade has to its credit, numerous firsts, of which the most important ones are:

- First organized Fire service.
- First to motorise Fire Fighting Appliances.
- First to install street Fire Alarm System.
- First to introduce professional Fire Drill Competitions.
- First Fire Service to establish an Ambulance Service.
- First to employ V.H.F. Radio Telephony for emergency Communication.

- First to commission various special fire fighting and rescue appliances and equipment, viz. Hydraulic Platforms (Snorkels), Breathing Apparatus Van, Special Rescue Tender, High Pressure Pumps, Power Cutters, Pneumatic Lifting Bags etc.
- First to formulate fire prevention rules/regulations in Respect of various occupancies, trades, storages etc.

## **GUIDELINES THAT CAN SAVE YOUR LIFE**

**While prevention is better than cure, there are simple safety procedures, which the Mumbai Fire Brigade conveys via mock drills and awareness campaigns**



Three stages of Fire: In the first stage, fire moves from ignition phase to blaze phase. It takes about 1 to 10 minutes. It is also termed as primary or incipient stage .This is the only stage at which a fire extinguisher can be used. In the second stage, the fire spreads rapidly over large areas. It takes about 10 to 20 minutes. Large quantity extinguishing media are required. No use of fire extinguishers. Sophisticated

sprinkler system can handle the situation. The third stage is where fire moves beyond control. It will take around 20 to 25 minutes and will require thousands of litres of water. At this stage, only the fire brigade can help.

### **Causes of fire:**

- Electrical
- Careless Smoking
- Spontaneous Combustion
- Chemical Reaction
- Lightning
- Hot Ashes
- Incendiaries

## **What to do in case of fire:**

- Do not waste time for collecting valuables
- Do not panic
- Inform fire brigade about fire
- Alert neighbours
- If possible, use fire extinguisher
- Do not take shelter in toilet
- Shut all the doors behind you
- Do not use lift to escape
- Exit to ground level instead of terrace
- Use nearest means of escape and the staircase available
- Report about your safe escape and any other information to the Fire Brigade or Police present at the site.

## **If trapped or stranded:**

- Stay close to the floor level
- Cover the gaps of the door by blanket or by rug or any other cloth
- Do not jump out of the building. Signal or shout for help

## **If clothes are on fire:**

- Do not run.
- Stop, drop, roll and cool and cover with blanket, pour water on the body
- Give first-aid and send injured people to hospital

## **Fire prevention tips for the citizens of Mumbai**

- Never leave food unattended on a stove. Keep cooking areas free of flammable objects.
- Avoid wearing clothes with long, loose-fitting sleeves when cooking. Also, supervise young children whenever they're near cooking surfaces.
- Never smoke in bed or leave burning cigarettes unattended. Do not empty smouldering ashes in a trash can.
- Always keep all ashtrays away from upholstered furniture and curtains.

- Keep all matches and lighters out of reach of children. Store them up high, preferably in a locked cabinet. Never use lighters or matches as a source of amusement for children; they may imitate you. If your child expresses curiosity about fire or has been playing with fire, calmly but firmly explain that matches and lighters are tools for adults only.
- Install smoke detectors on every floor of the home, including the basement, and particularly near rooms in which people sleep.
- Test all the smoke detectors at home every month to ensure they work properly.
- Use long-life smoke detectors with lithium-powered batteries and hush buttons, which allow persons to stop false alarms quickly.
- If long-life detectors are not available, use regular alarms and replace batteries annually.
- Devise a family fire escape plan and practice it every 6 months. In the plan, describe at least two different ways each family member can escape every room.
- Designate a safe place in front of the home or close by for family members to meet after escaping a fire.
- Don't overload sockets. Try to keep to one plug per socket. Too many electrical appliances plugged into one socket can overload it, which can lead to overheating.
- Electrical appliances, plugs and cables that are old or poorly wired can also be a real danger.
- Candles, decorative lights and decorations are also a growing cause of fires.
- Make sure candles are secured in a stable holder and kept away from curtains, fabrics and paper.
- Always blow the candles out when you are leaving the room or going to bed.



## ‘125th Anniversary will be commemorated as Safety Year’

**H N Mujawar, Chief Fire Officer, Mumbai Fire Brigade, provides perspectives on the significance of the occasion**

**H N Mujawar**



Mumbai Fire Brigade (MFB) is one of the oldest municipal fire services rendering the service of saving the life and property of citizens from fire and other calamities. The men of the brigade are proud to be part of the 125th Anniversary of this brigade which has set an example of dedicated service. On the occasion of completion of 125 years of existence of the brigade, we have decided to observe this year as a fire safety year and a lot of public awareness programs will be undertaken.

Initially, MFB was setup as per the provision of Mumbai Municipal Corporation act 1888 to discharge the obligatory duty of saving the life and property from fire. However over a period of time, the MFB has been called to render the services for other emergencies such as major collapse, accidents, birds rescue, animal rescue, chemical emergencies oil spillages, tree collapse, drowning cases or any other incidences where the life is in trouble. The statistics of last 5 years of emergency calls shows that there was increase in the number of calls by 20% per year. In the year 2010-11, MFB has responded more than 16000 emergency calls. Acquisition of new vehicles and equipment has been proposed in the financial year 2012-13. Considering the density and height of high rise buildings MFB has decided to procure 90 metres Snorkel in the year 2012-13. Also for effective emergency call handling, the computerized control and command system will be implemented in the year 2012-13. After learning a lesson of 26/11, the brigade has decided to acquire Fire Robots. MFB is making constant endeavours to upgrade the skills of fire personnel, infrastructure and acquiring new technology to face the present and future challenges.