

O.I.T.A.F. Congress 2024

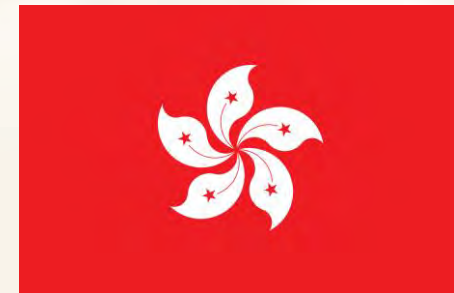
The transformation of funicular system since 1888 – The Peak Tram

Samuel LEE





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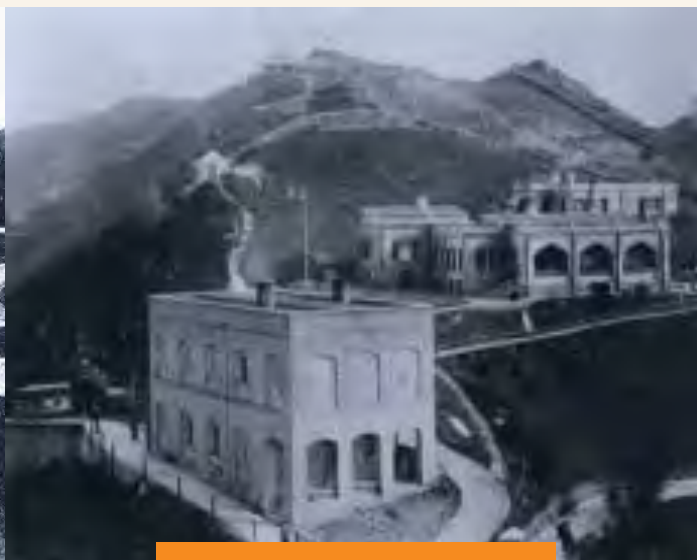


Hong Kong





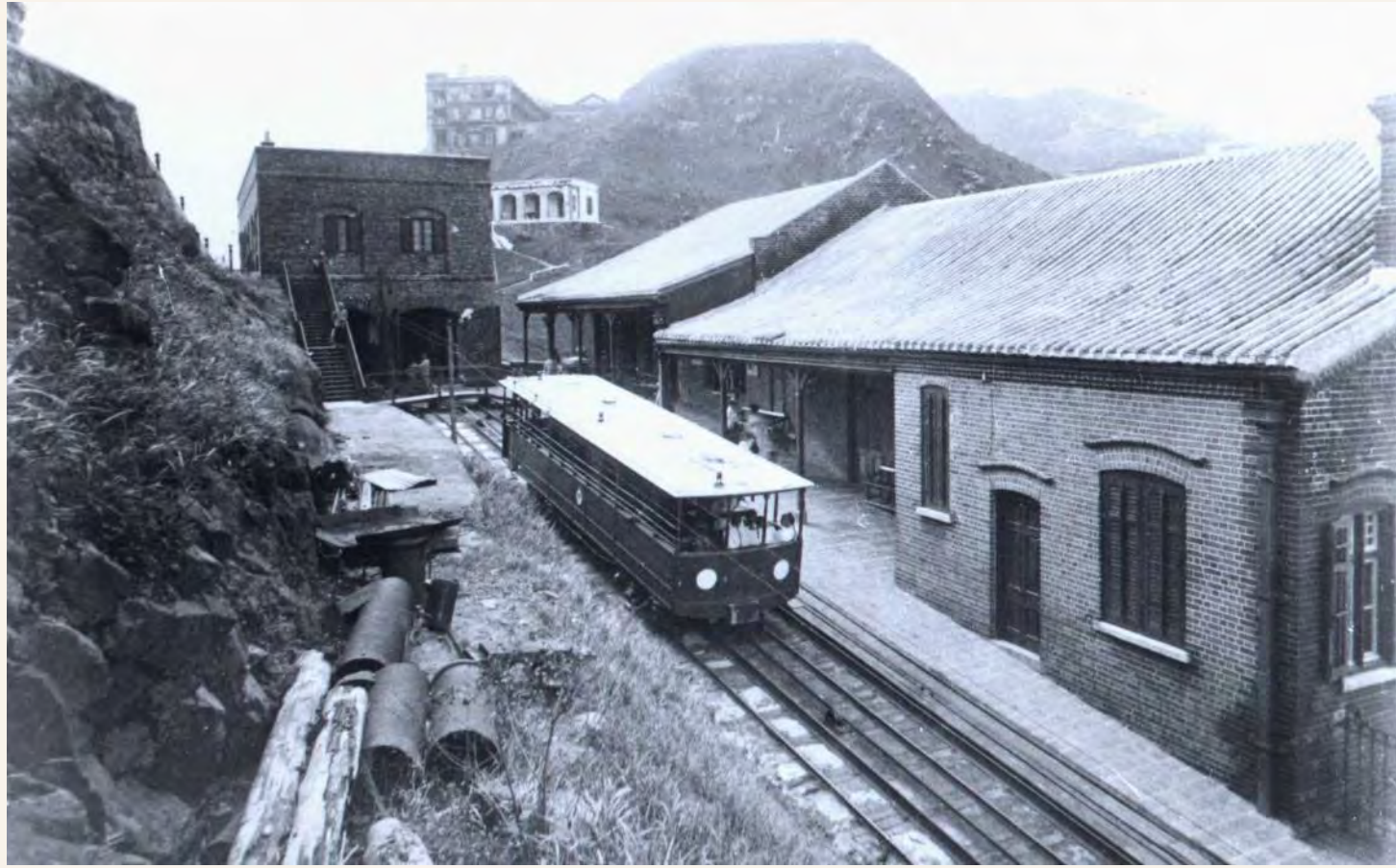
The Peak Hotel
(opened in 1873)



Old Peak



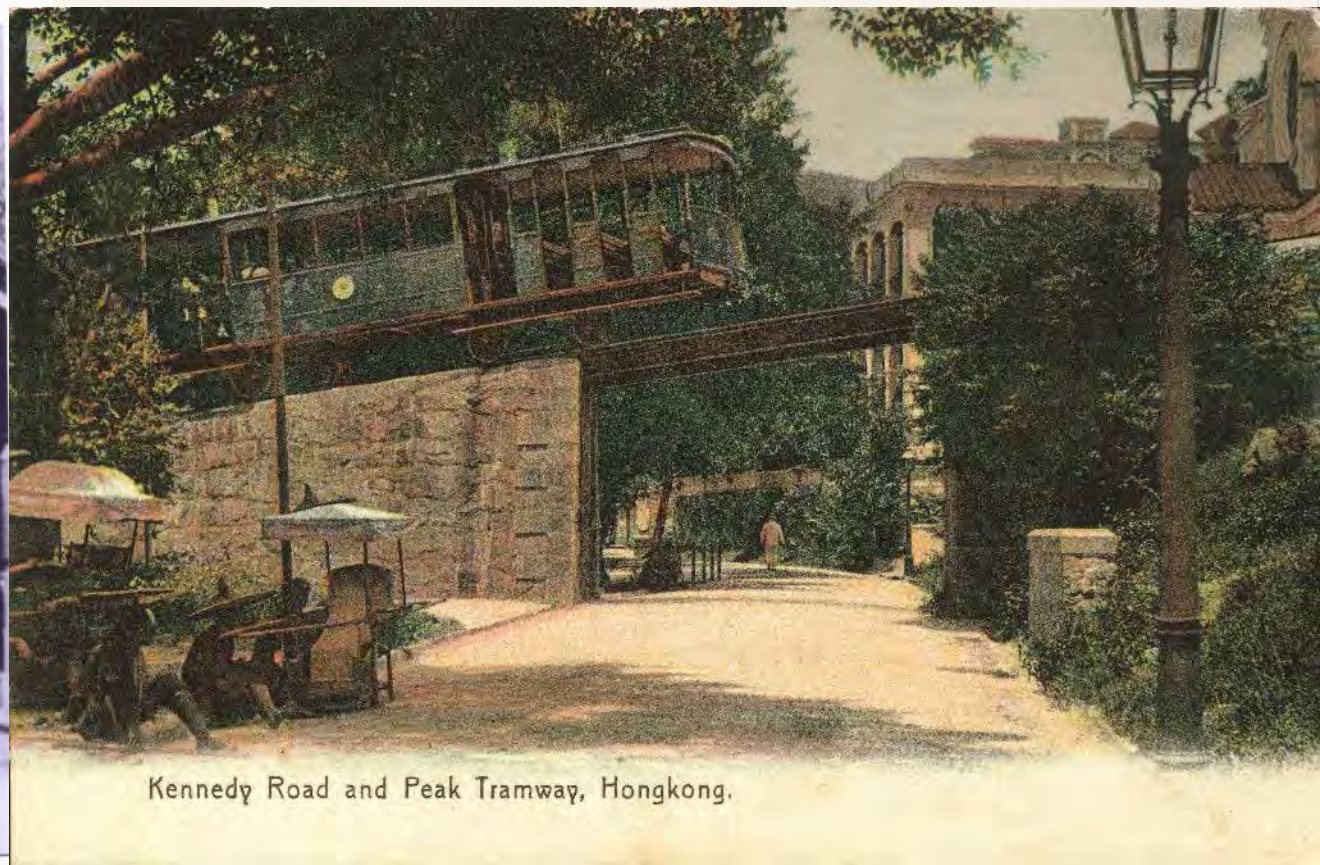
Sedan Chair



In 1881 Scotsman Alexander Findlay Smith devised a plan of a new tram system

In 1882 Approval was granted

1st Generation of Peak Tram



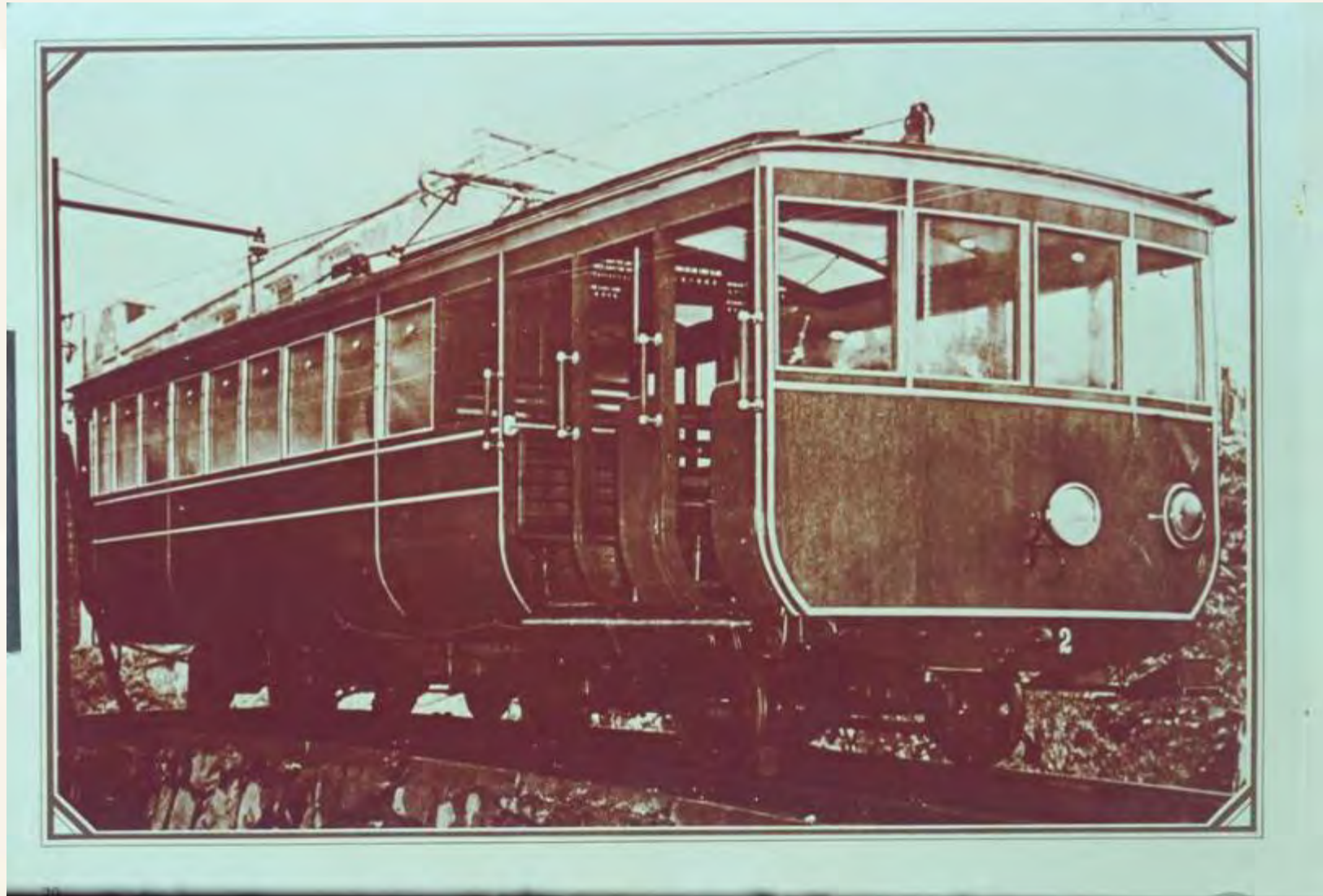
In 1888 Tramway opened for public traffic

1st Generation of Peak Tram

- Hong Kong's first mechanized public land transport
- The first funicular railway in Asia
- Built with materials carried up the Peak by hand
- Run by: coal-fired steam engine
- Single car trams
- Wooden tramcars
- The first 2 seats were reserved for His Excellency, the Governor. Those front seats were not allowed to be occupied by any passenger.



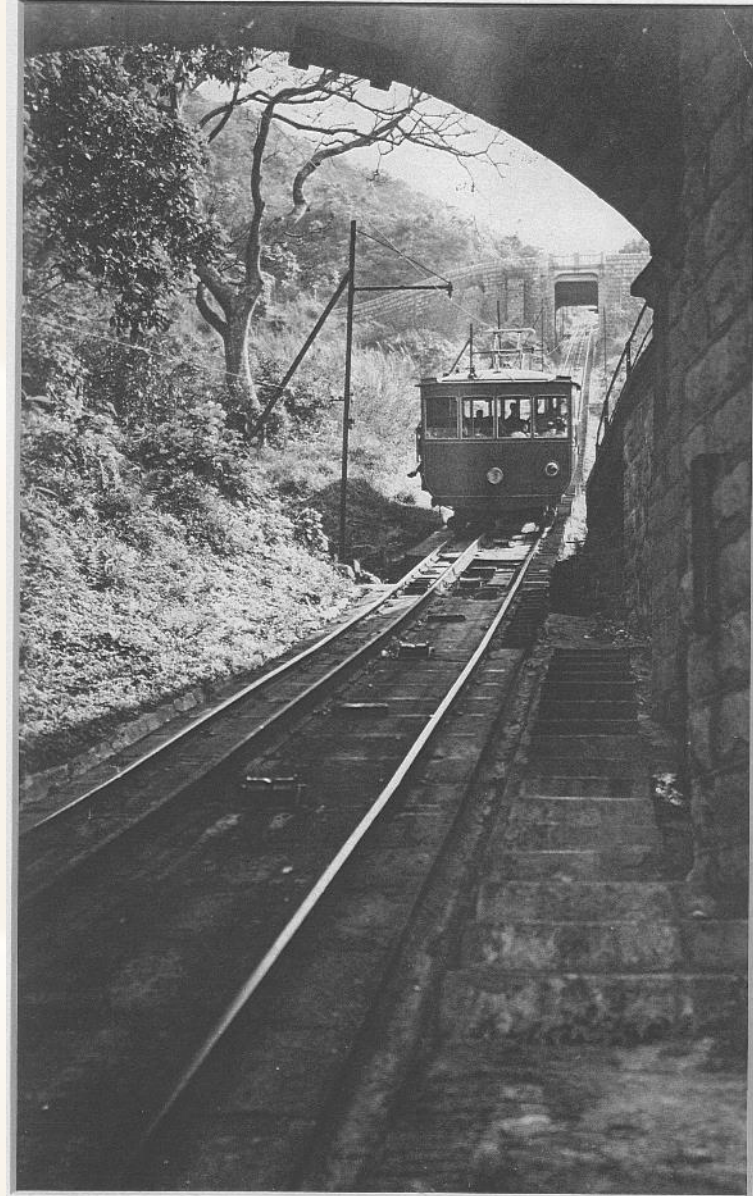
2nd Generation of Peak Tram

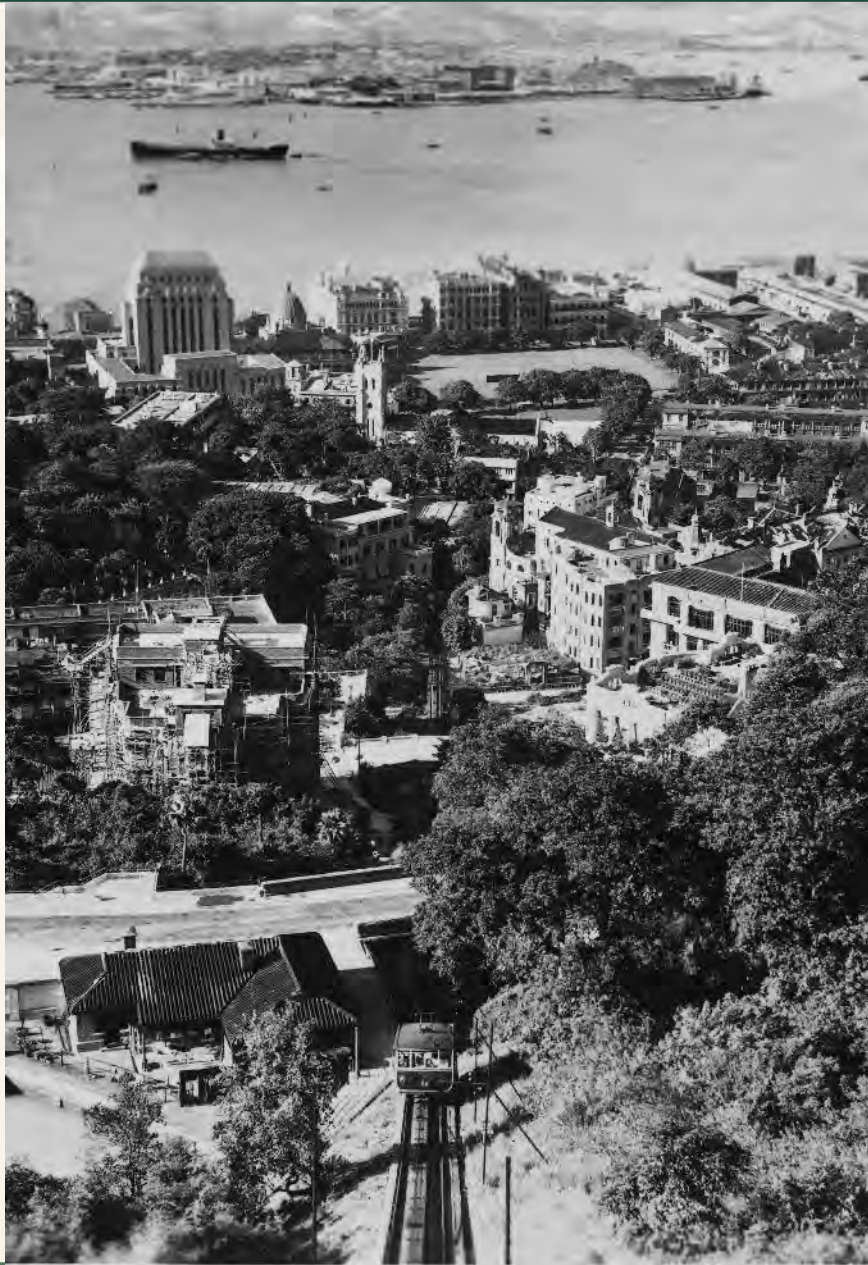


2nd Generation of Peak Tram



An electrically powered haulage gear system replaced steam power





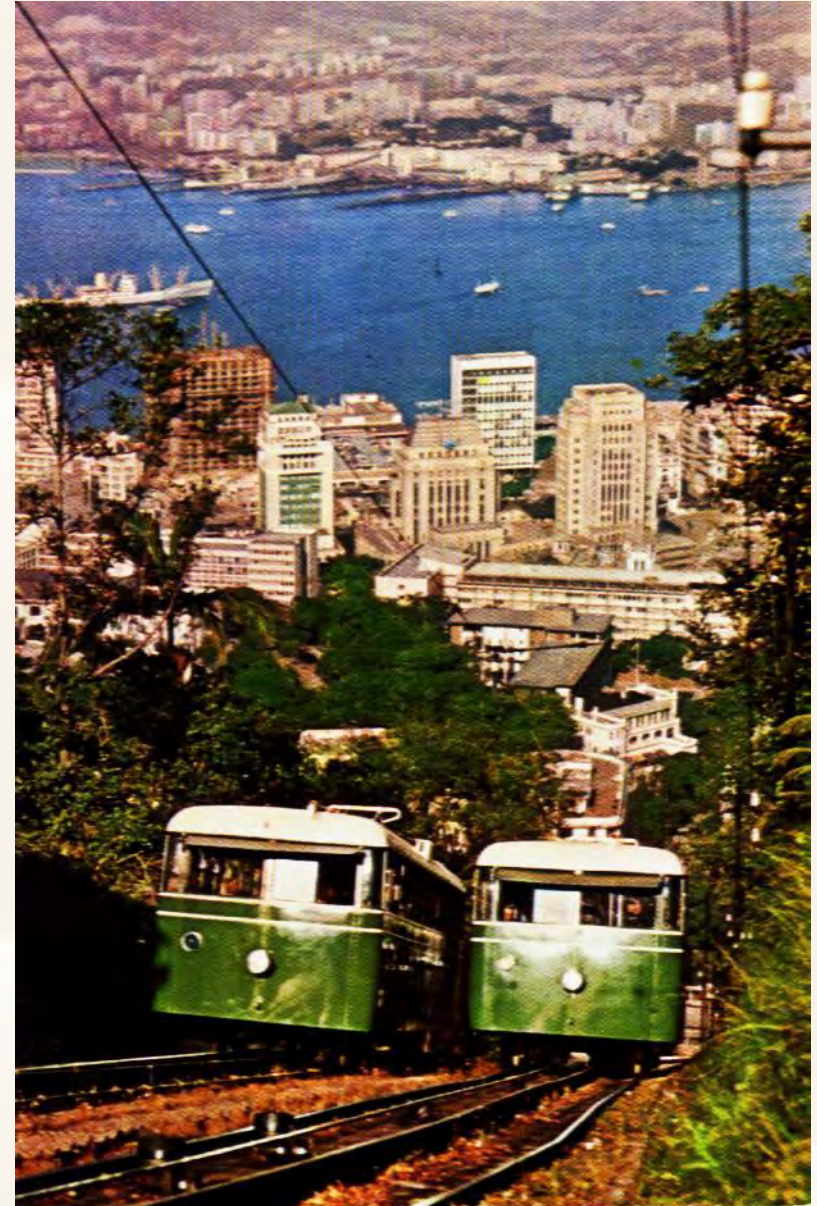
3rd Generation of Peak Tram



3rd Generation of Peak Tram



After the World War II, all-metal tramcar was introduced



4th Generation of Peak Tram



4th Generation of Peak Tram

To protect passengers from the weather, a fully enclosed, lightweight all-aluminum tramcar was put in service



5th Generation of Peak Tram



5th Generation of Peak Tram



5th Generation of Peak Tram

- The Peak Tram is modernized for its 100th anniversary
- Introducing microprocessor-control technology
- Run by: Computerized Electric DC motor
- Two-compartment trams
- From 3 million to 6 million passengers yearly
- Sky roof for better views
- Control system in the Upper Terminus



5 Generations of Peak Tram



1888 ——— 1926 ——— 1948 ——— 1959 ——— 1989

Capacity

30

52

62

72

120

6th Generation of Peak Tram



Capacity

210



6th Generation Peak Tram Upgrade Project

6th Generation of Peak Tram

- A significant upgrade project, included brand new tramcars, the replacement of all haulage, control and signaling systems, new ropes and track rails, and the refurbishment of its Central and Peak Termini to facilitate the beautiful new, larger capacity tramcars
- Run by: Super efficient AC drive motors with inverter control
- Largest funicular haulage drum in the world
- 75% increase carrying passenger capacity
- Running on bogies for smoother ride
- To enhance the passenger safety, the automatic screen gates had been installed at the boarding platforms



Peak Tram Stations

Length of Track - 1,278 metres

Track Gradient - From 8 to 26 degrees



The Peak Tower

Baker Road

May Road



MacDonnell Road



Kennedy Road



Garden Road





Peak Tram Difference Between 5th vs 6th

*

| Year of construction | 1989 (5th) | 2022 (6th) |
|-------------------------|-------------------------------|--------------------------------|
| Length | 1364 meters | 1278 meters |
| Difference in elevation | 368 meters | 356 meters |
| Travel Speed | 6 (4) metres / second | 6 (4) metres / second |
| Capacity | 900 person / hour / direction | 1575 person / hour / direction |
| Capacity of Vehicle | 120 pax | 210 pax |
| Number of Vehicle | 2 | 2 |
| Diameter of Haul Rope | 44 mm | 50.5 mm |
| Diameter of Line Sheave | 180 / 320 mm | 180 / 320 mm |
| Rail Type | AS-45 (22.32kg/m) | 33E 1 (33.47kg/m) |
| Rail Gauge | 1575 | 1575 |
| Drive (Upper Terminus) | | |
| Winch Drive | diameter rated: 4400mm | diameter rated: 5000mm |
| Rated Motor Power | 485 kW | 900 kW |
| Peak Motor Power | 924 kW | 1765 kW |

5 New Engaging Zones at Lower Terminus

Eye of Infinity

Sculpture

Created by Lindy Lee, an Australian artist of Chinese ancestry, the 10-metre-tall sculpture installed at the Peak Tram Central Terminus is inspired by Hong Kong's *spirit of ascension*, and features a constantly evolving lighting display.



5 New Engaging Zones at Lower Terminus

The Beating Heart

Historical Haulage Equipment Display

An evocative AV presentation combined with historical equipment depicts the transformation of haulage and operational systems from 1888 to the present.



5 New Engaging Zones at Lower Terminus

An Icon is Born

1st Generation Peak Tram Replica

Actually climb aboard the wooden 1st Generation Peak Tram, to take photographs and get a feel for the times in the old days.



5 New Engaging Zones at Lower Terminus

Once Upon a Tram

Peak Tram History

In ultra-wide high-definition, the parallax scrolling of a constantly-journeying video revisits key moments of the history of Hong Kong and the Peak Tram.



5 New Engaging Zones at Lower Terminus



Go Wild At The Peak

Hyperreal Immersive Video

A wraparound full-immersion video experience, inspires visitors to learn and protect the diverse wildlife found at the Peak.





136th Anniversary

THANK YOU



PEAK TRAMWAYS COMPANY, LIMITED
山頂纜車有限公司

