

# JAPANESE RAILWAYS

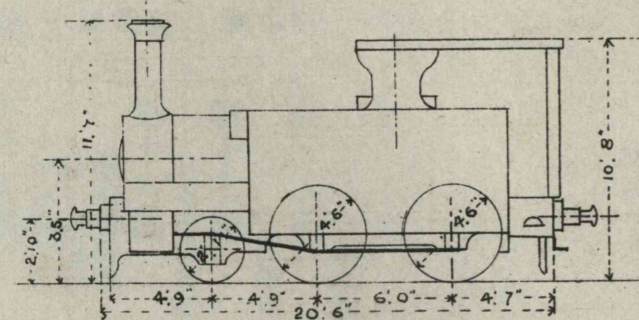
## LOCOMOTIVES

THIS BOOK CONTAINS OUTLINE SKETCHES OF EACH DIFFERENT CLASS OF THE LOCOMOTIVES NOW WORKING ON THE RAILWAYS IN JAPAN. (EXCLUDING THOSE FOR RAILWAYS OF SMALLER GAUGES SUCH AS HANKAI, IYO, &c.) THE SKETCHES ARE MADE ON THE SCALE OF  $\frac{1}{16}$ " OF AN INCH TO ONE FOOT FROM THE DRAWINGS AND TABLES PREPARED BY THE LOCOMOTIVE SUPERINTENDENTS OF GOVERNMENT RAILWAYS AND ALSO FROM EACH PRIVATE RAILWAY COMPANY. SOME SPARE PAGES ARE LEFT ON WHICH NEW TYPES OF LOCOMOTIVES CAN BE PLACED WHEN SUCH ARRIVE IN THE FUTURE, THE YEARS MARKED ON THE ENGINES ARE THOSE IN WHICH THEY FIRST CAME INTO USE, LOADS NOTED TO BE HAULED BY THE ENGINES ARE DERIVED FROM CALCULATION AND CANNOT ALWAYS BE RELIED ON IN PRACTICE,

### GOVERNMENT TRAILWAY.

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
DUBS & CO  
No 9, 11.

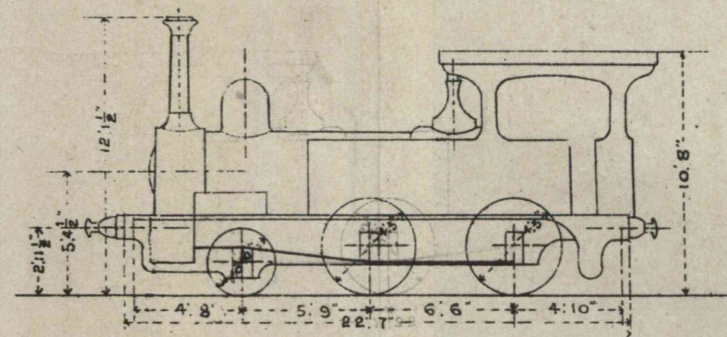


CYLINDERS	12 x 18"	WEIGHT ON LEADING WHEELS	6,000
DIAM OF LEADING WHEELS	2' 11"	" " DRIVING	8,400
" " DRIVING	4' 6"	" " TRAILING	11,000
" " TRAILING	4' 6"	" OF ENGINE IN WORKING ORDER	25,400
RIGID WHEEL BASE	23' 4"	CAPACITY OF TANKS	800 GALLONS
TOTAL LENGTH OF ENGINE	54' 3"	FUEL CARRIED	20 CWT'S
HEATING SURFACE OF BOILER	543 SQ FT	WORKING STEAM PRESSURE	120 LBS PER SQ IN
FIRE GRATE AREA	85		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
SHARP STEWART & CO  
No 21, 23

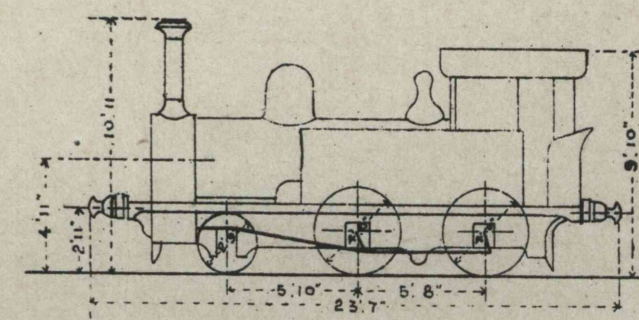


CYLINDERS	12 x 17"	WEIGHT ON LEADING WHEELS	6,000
DIAM OF LEADING WHEELS	3' 0"	" " DRIVING	7,100
" " DRIVING	4' 5"	" " TRAILING	7,100
" " TRAILING	4' 5"	" OF ENGINE IN WORKING ORDER	21,000
RIGID WHEEL BASE	25' 7"	CAPACITY OF TANKS	500 GALLONS
TOTAL LENGTH OF ENGINE	55' 1"	FUEL CARRIED	15 CWT'S
HEATING SURFACE OF BOILER	551 SQ FT	WORKING STEAM PRESSURE	120 LBS PER SQ IN
FIRE GRATE AREA	75		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
YORKSHIRE ENGINE WORKS  
No 13

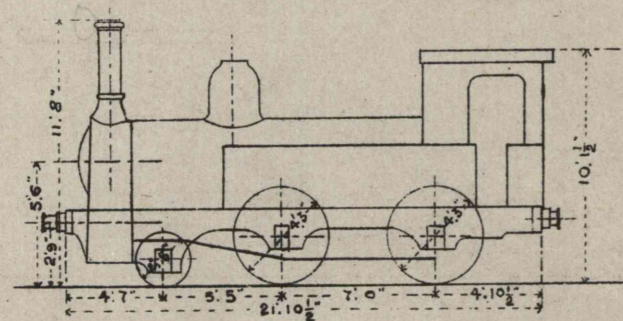


CYLINDERS	11 1/2 x 17"	WEIGHT ON LEADING WHEELS	6,140
DIAM OF LEADING WHEELS	2' 9"	" " DRIVING	8,700
" " DRIVING	4' 0"	" " TRAILING	8,150
" " TRAILING	4' 0"	" OF ENGINE IN WORKING ORDER	21,150
RIGID WHEEL BASE	25' 7"	CAPACITY OF TANKS	450 GALLONS
TOTAL LENGTH OF ENGINE	53' 7"	FUEL CARRIED	15 CWT'S
HEATING SURFACE OF BOILER	500 SQ FT	WORKING STEAM PRESSURE	110 LBS PER SQ IN
FIRE GRATE AREA	8		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
VULCAN FOUNDRY  
No 21

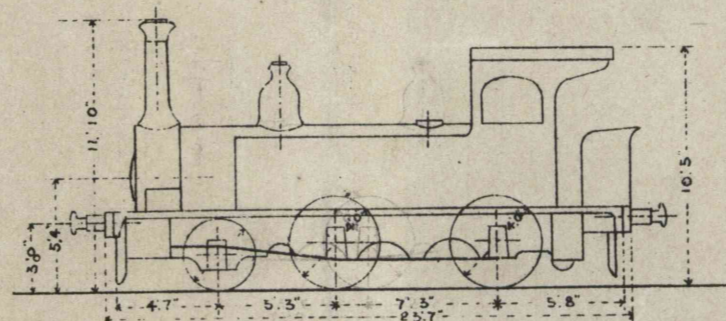


CYLINDERS	12 x 18"	WEIGHT ON LEADING WHEELS	5,150
DIAM OF LEADING WHEELS	2' 8"	" " DRIVING	8,100
" " DRIVING	4' 5"	" " TRAILING	8,700
" " TRAILING	4' 5"	" OF ENGINE IN WORKING ORDER	25,700
RIGID WHEEL BASE	25' 7"	CAPACITY OF TANKS	450 GALLONS
TOTAL LENGTH OF ENGINE	56' 2"	FUEL CARRIED	10 CWT'S
HEATING SURFACE OF BOILER	562 SQ FT	WORKING STEAM PRESSURE	140 LBS PER SQ IN
FIRE GRATE AREA	87		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
AVONSIDE ENGINE WORKS  
No 25, 7

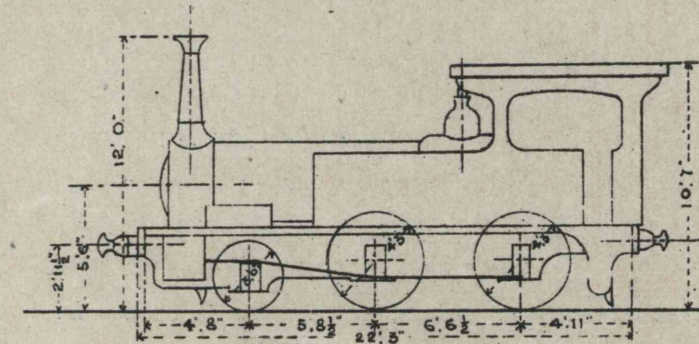


CYLINDERS	12 x 18"	WEIGHT ON LEADING WHEELS	6,000
DIAM OF LEADING WHEELS	4' 0"	" " DRIVING	8,800
" " DRIVING	4' 0"	" " TRAILING	9,100
" " TRAILING	4' 0"	" OF ENGINE IN WORKING ORDER	24,400
RIGID WHEEL BASE	25' 7"	CAPACITY OF TANKS	600 GALLONS
TOTAL LENGTH OF ENGINE	55' 1"	FUEL CARRIED	15 CWT
HEATING SURFACE OF BOILER	551 SQ FT	WORKING STEAM PRESSURE	120 LBS PER SQ IN
FIRE GRATE AREA	85		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....

TYPE.....

FOUR WHEEL COUPLED TANK ENGINE  
SHARP STEWART & CO  
No 15, 15, 17, 19.



CYLINDERS	12 x 17"	WEIGHT ON LEADING WHEELS	8,110
DIAM OF LEADING WHEELS	3' 0"	" " DRIVING	8,110
" " DRIVING	4' 5"	" " TRAILING	8,110
" " TRAILING	4' 5"	" OF ENGINE IN WORKING ORDER	21,700
RIGID WHEEL BASE	25' 7"	CAPACITY OF TANKS	500 GALLONS
TOTAL LENGTH OF ENGINE	53' 7"	FUEL CARRIED	15 CWT'S
HEATING SURFACE OF BOILER	531 SQ FT	WORKING STEAM PRESSURE	120 LBS PER SQ IN
FIRE GRATE AREA	75		

THEORETICAL LOAD HAULED ON 1 IN 100 AT 20 MILES AN HOUR .....