SAN Japanese Railway Company (JRC)
Takayama Blue Point Results - 2018

SAN JRC Takayama Blue Point Test Description

This test was contracted by Japanese Rail Company at a set of turnouts in Takayama, Gifu Japan. These turnouts are in close proximity to each other. The concept is to provide a test of exactly the same turnout configuration in construct and location for two side by side turnouts with one variance – the control of the heat.

Turnout 1: was outfitted with SAN heaters , 20 foot switch point heaters at ~ 200 w/ft. This turnout is controlled by a Shin Yosha Dispatch controlled heating controller. Several rail heating sensors were placed on the rail points to measure heat. The system on/off time was measured through the dispatch system. This is a dispatch controlled heating system. This Turnout is the "Control Group".

Turnout 2: was outfitted with SAN heaters , 20 foot switch point heaters at ~ 200 w/ft. This Turnout is controlled by a SAN automated Blue Point controller. Several rail heating sensors were placed on the rail points to measure heat. The system on/off time was measured directly at the controller by the Blue Point system. This is an automated Blue Point controlled heating systm.

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Turnout 1 = Shin Yosha Controlled Heat – Dispatch Controlled Heating
- ➢ Total Heating Time 1,355 hours total
- ➢ Hourly Heating Potential = 8 kilowatts/per hour

Turnout 2 = SAN Electro Heat – Blue Point Automated Controlled Heating
- ➢ Total Heating Time 265 hours total (including preheat mode)
- ➢ Hourly Heating Potential = 8 kilowatts/per hour

Results
- ➢ Total Season Energy Savings = 8,720 kilowatts per turnout
- ➢ **Total Energy Savings ~ 80%**
- ➢ At an Electric Rate of ten cents p/kwh ~ $872 per turnout per season
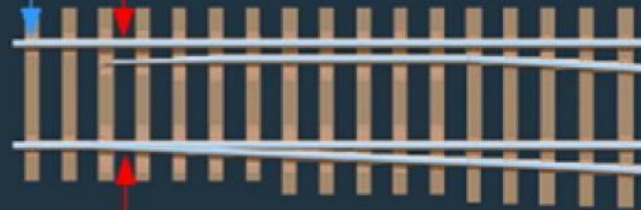
Mode SAN
Auto. High Airtemp.

OFF

AIR temp.	6,7	°C
Windspeed	1,6	m/s
Main hours	2540,2	h
Snow hours	297,6	h
Battery	13,6	V

High AIR temp.	250,5	h
Min Heating	0,0	h
PreHeat Mode	1963,0	h
PreHeat Heating	127,0	h
SnowHeat Mode	296,8	h
SnowHeat Heating	140,2	h
BoostHeat Mode	0,1	h
BoostHeat Heating	0,1	h
Blizzard Heating	0,3	h
Manual Heating	0,0	h
Reset Date	12-12-2017	

SAN

RS3 Cold RS1 Hot
6,7   6,4

6,4
RS2 Hot

ON temp.	1,5	°C
RSmin Hot	6,4	°C
OFF temp.	2,5	°C
Heating	●	
Inrush On	347	
Heating hours	267,7	h

Shin -Yosha

RS4 Aux
7,3
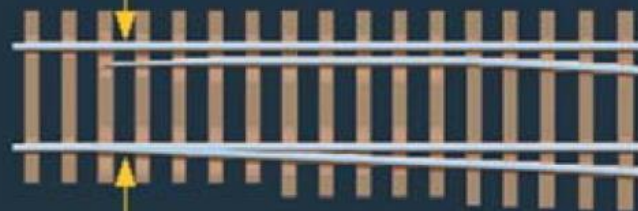
7,2
RS5 Aux

Heating	●	
Inrush On	8	
Heating hours	1378,3	h

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