

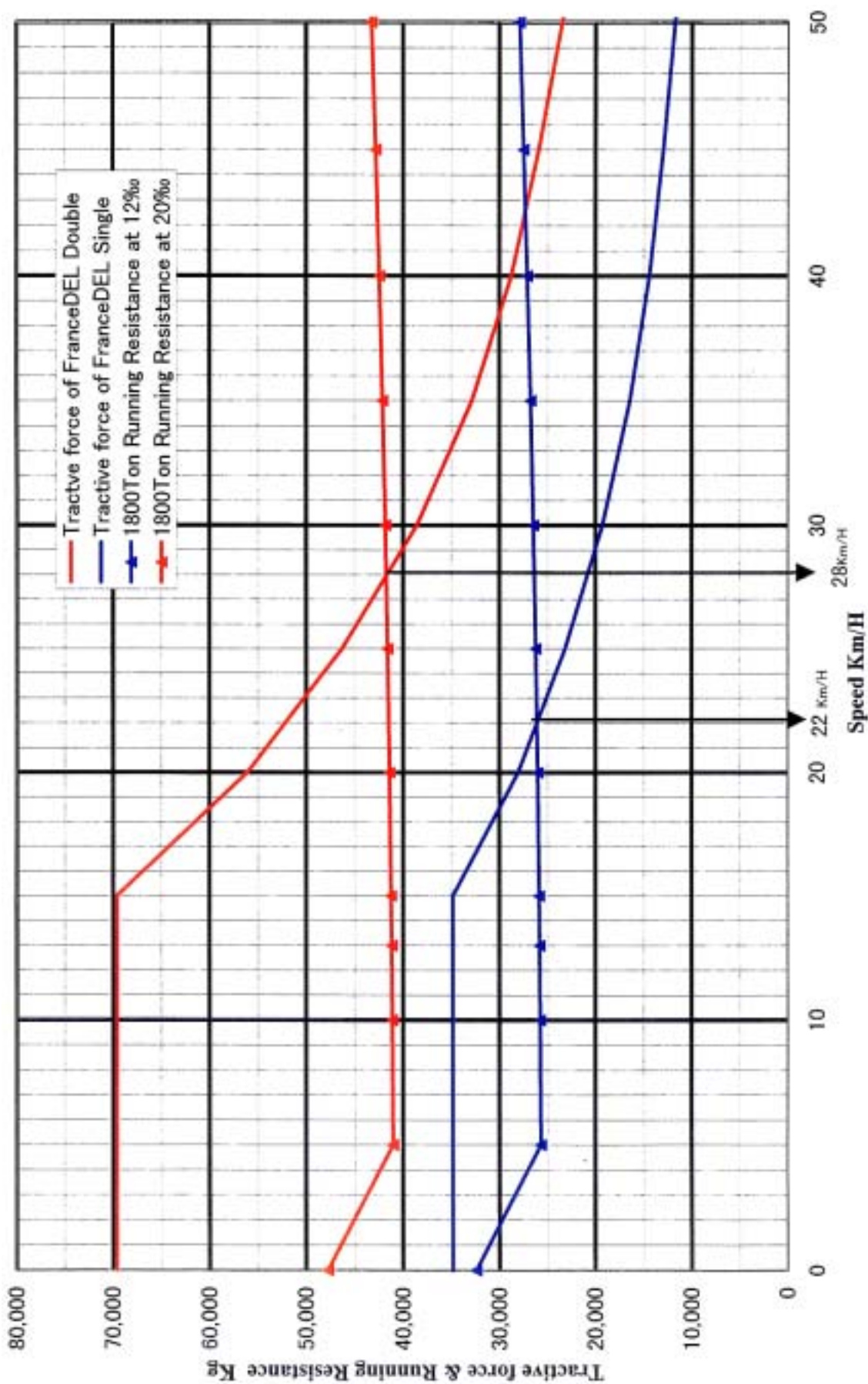
# Appendix

## **Appendix 5**

**Appendix 5.1 Balancing speed on the Gradient**

**Appendix 5.2 Running simulation between Tartous and Homs  
(New line and Existing line)**

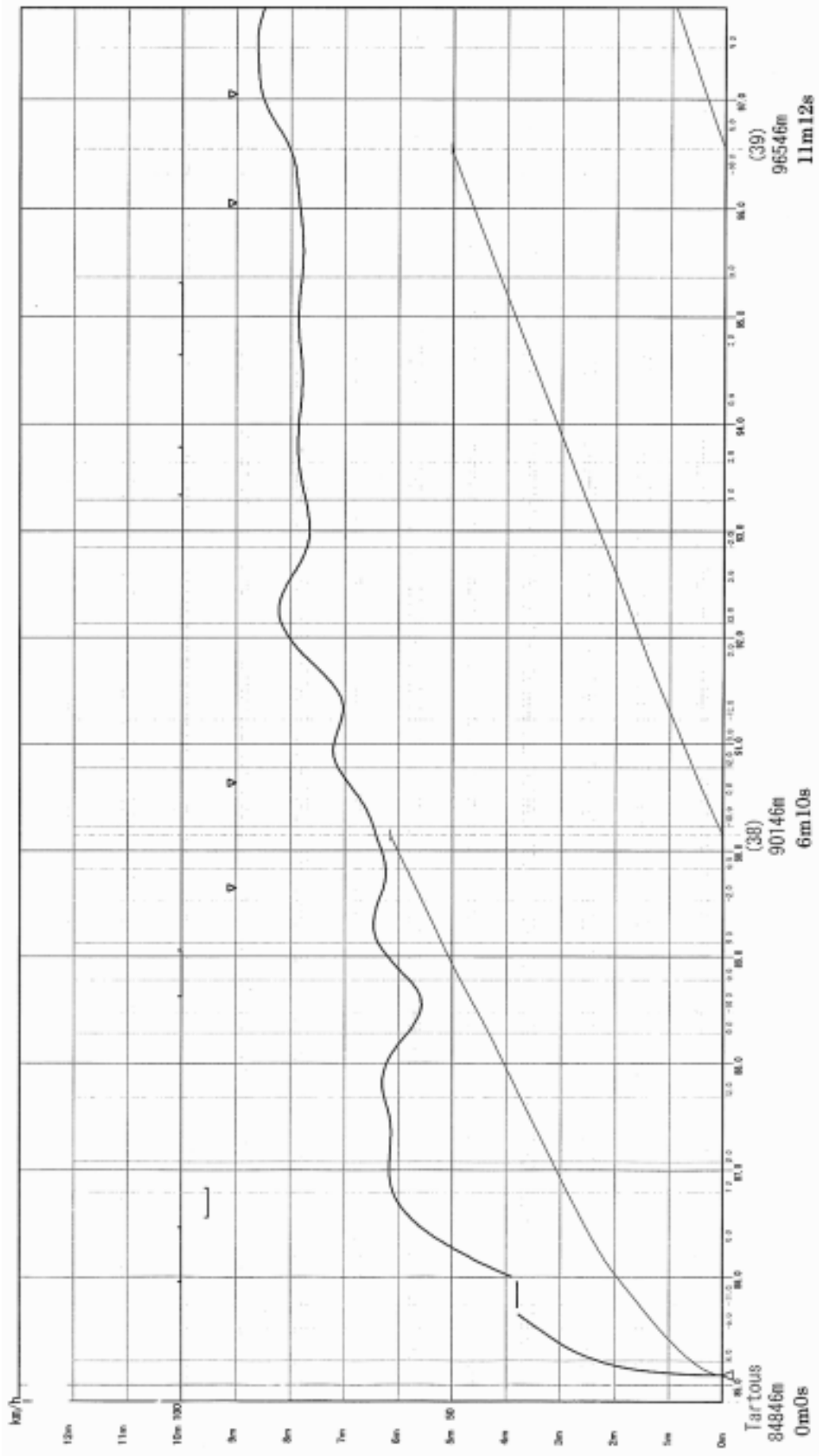
Appendix 5.1 Balancing speed on the Gradient

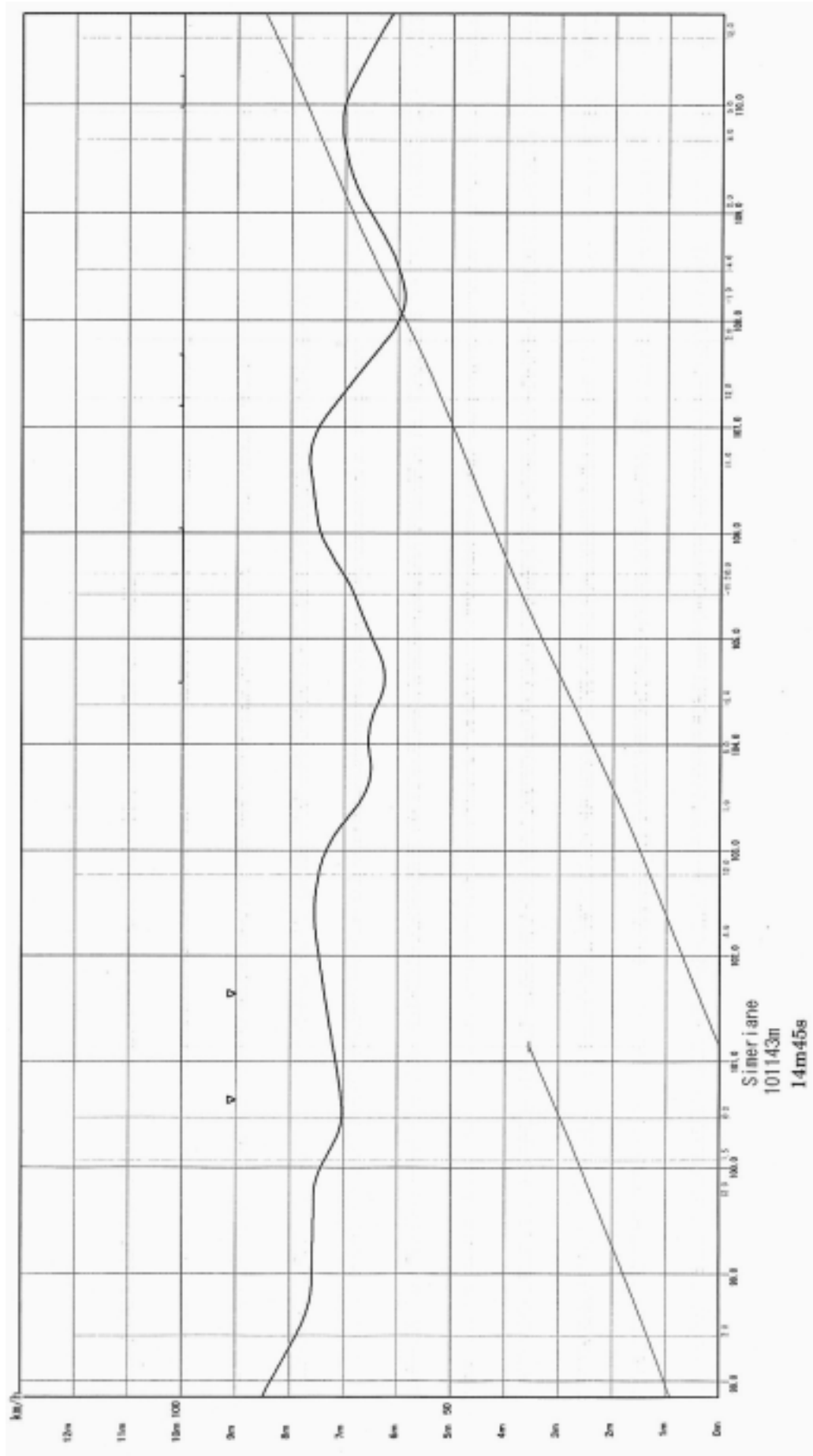


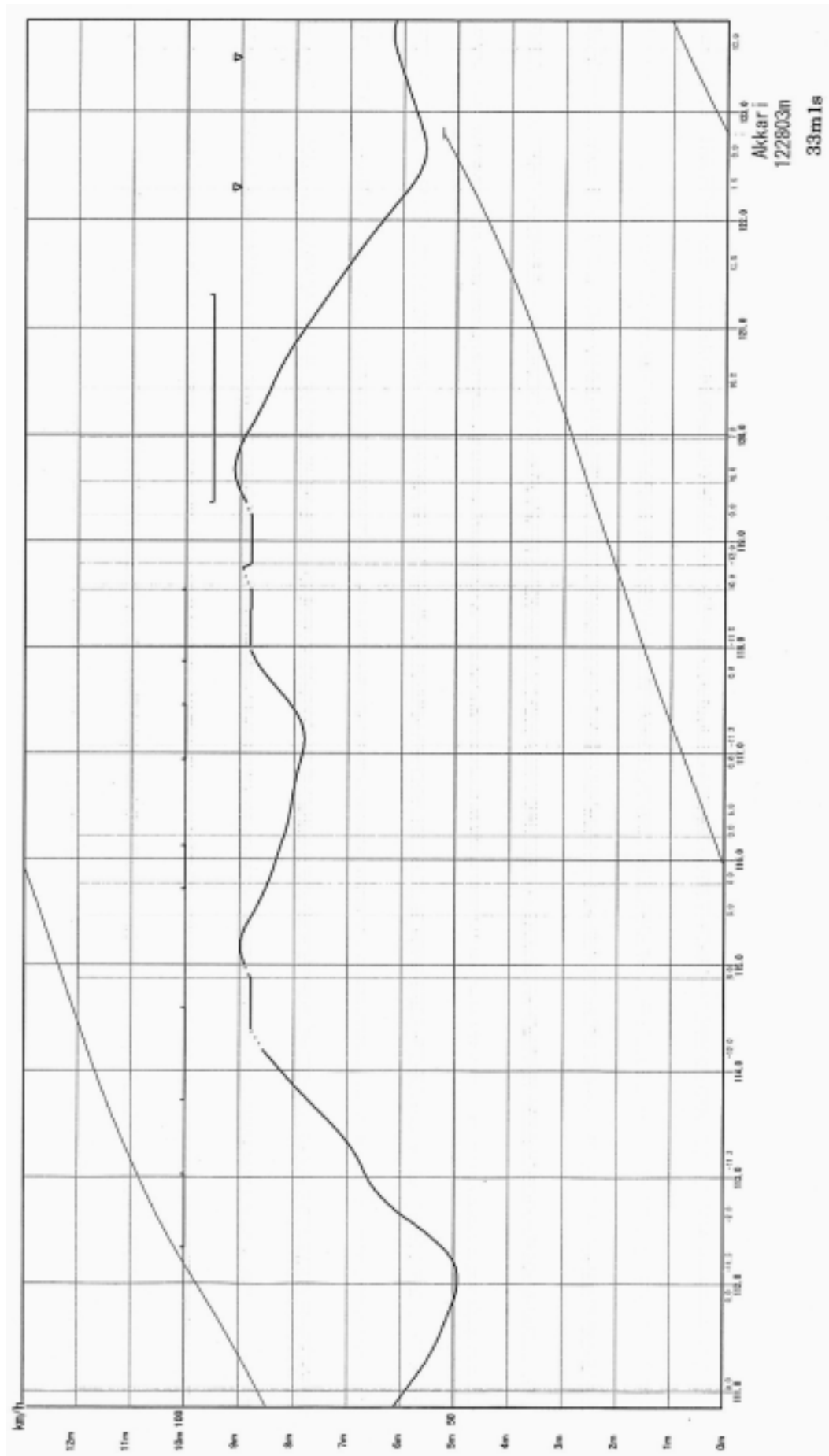
Appendix 5.2 Running simulation between Tartous and Homs  
(New Line and Existing Line)

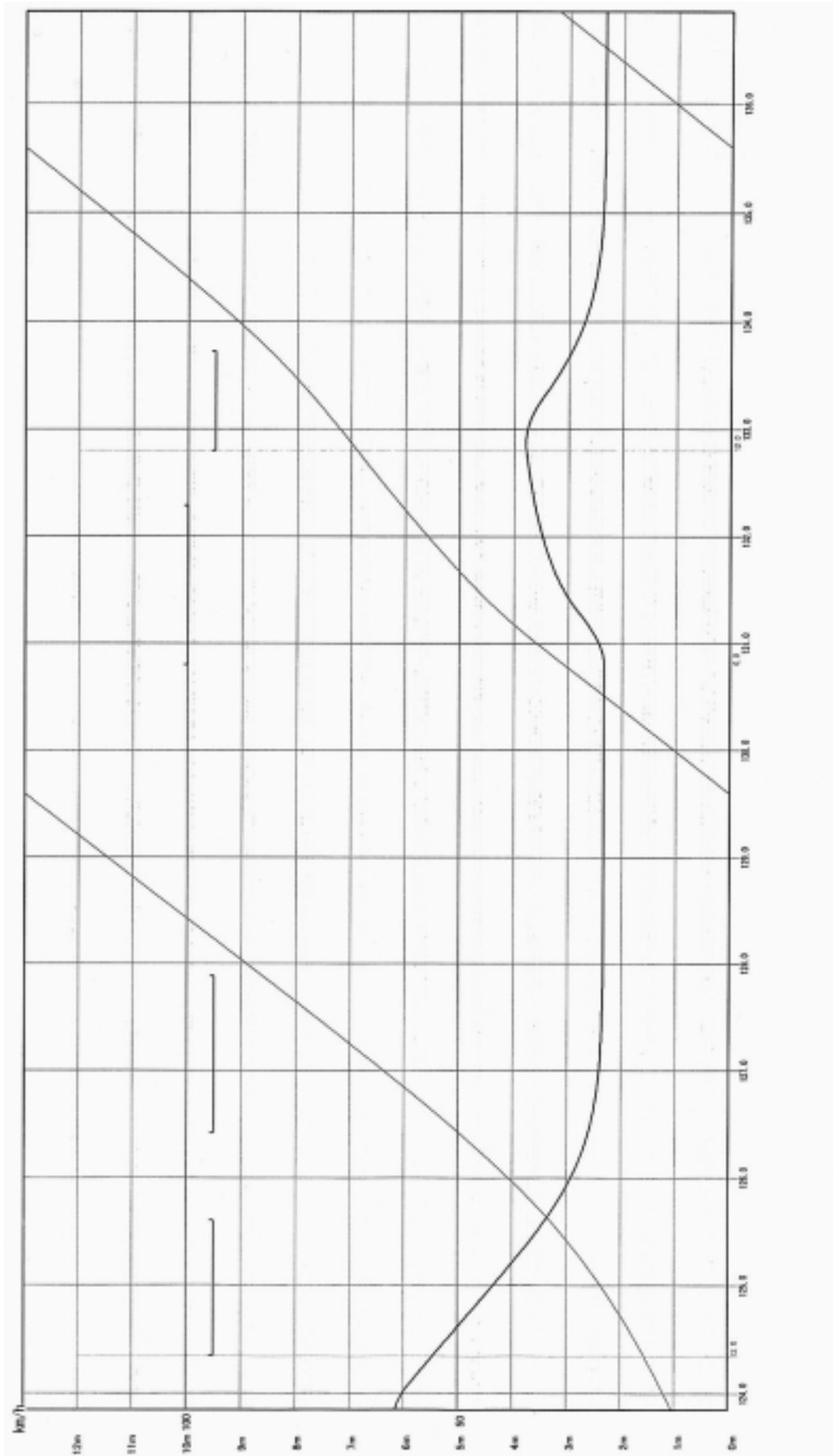
Tartous ~ Homs New Line  
DEL 3200 Type 1,800ton

Station name	Distance(m)	Calculated running time	Standard running time	Accumulated standard running time	Accumulated standard running time (including stopping time)	Average speed between stations(km/h)
Tartous	84,846	0:00:00	0:00:00	0:00:00	0:00:00	
(38)	90,146	0:06:10	0:06:15	0:06:15	0:06:15	51.6
(39)	96,546	0:05:02	0:05:15	0:11:30	0:11:30	76.3
Simeriane	101,143	0:03:33	0:03:45	0:15:15	0:15:15	77.7
Akkari	122,803	0:18:16	0:18:30	0:33:45	0:33:45	71.1
Tel Kalakha	142,303	0:42:46	0:43:00	1:16:45	1:16:45	27.4
Umm Jaamah	150,303	0:09:06	0:09:15	1:26:00	1:26:00	52.7
Al-Khanse	172,182	0:49:12	0:49:15	2:15:15	2:15:15	26.7
Kharbettin	188,351	0:12:56	0:13:00	2:28:15	2:28:15	75.0
5km	191,816	0:03:00	0:03:00	2:31:15	2:31:15	69.3
Homs	196,803	0:08:29	0:08:30	2:39:45	2:39:45	35.3

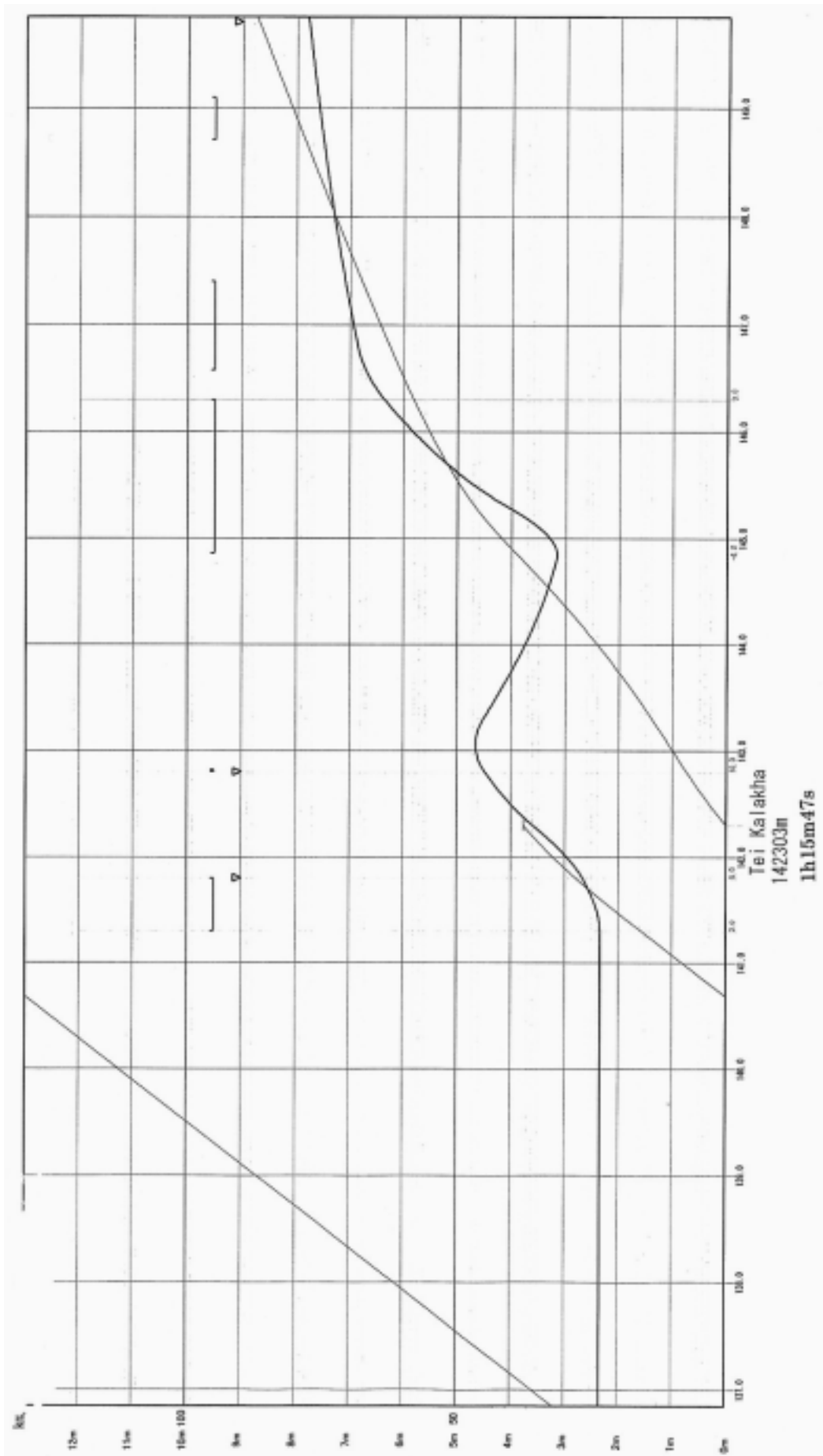


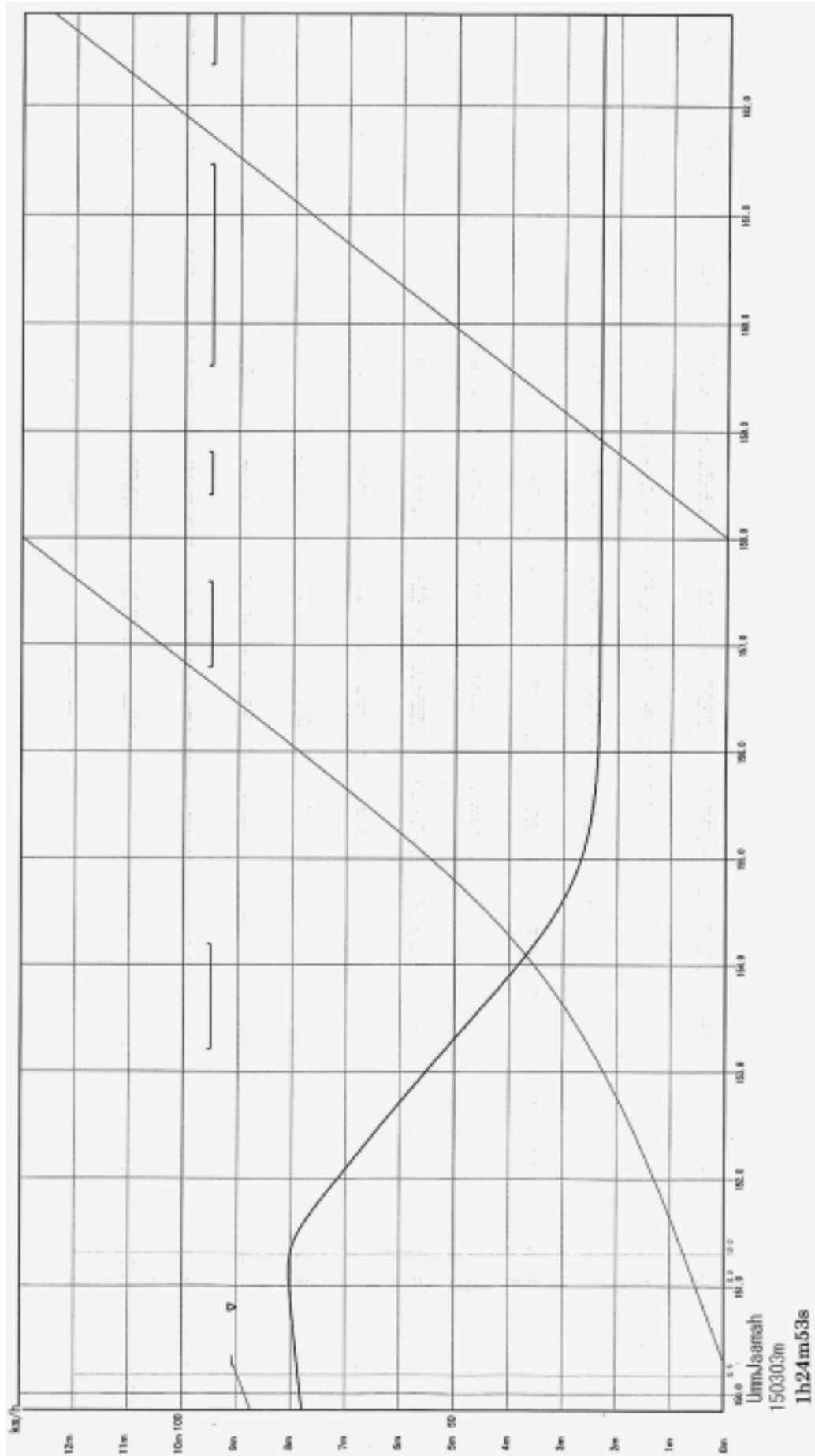


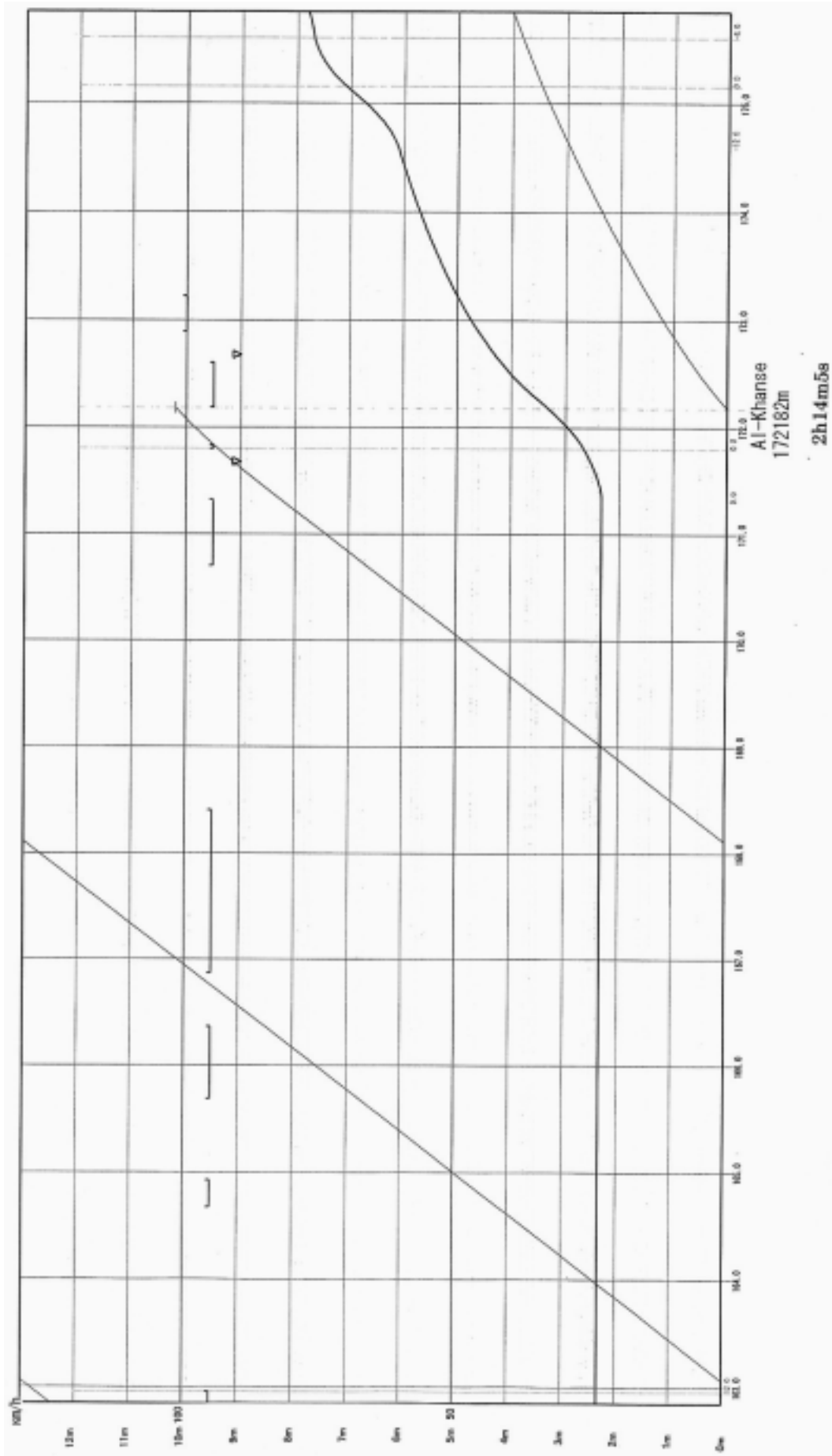


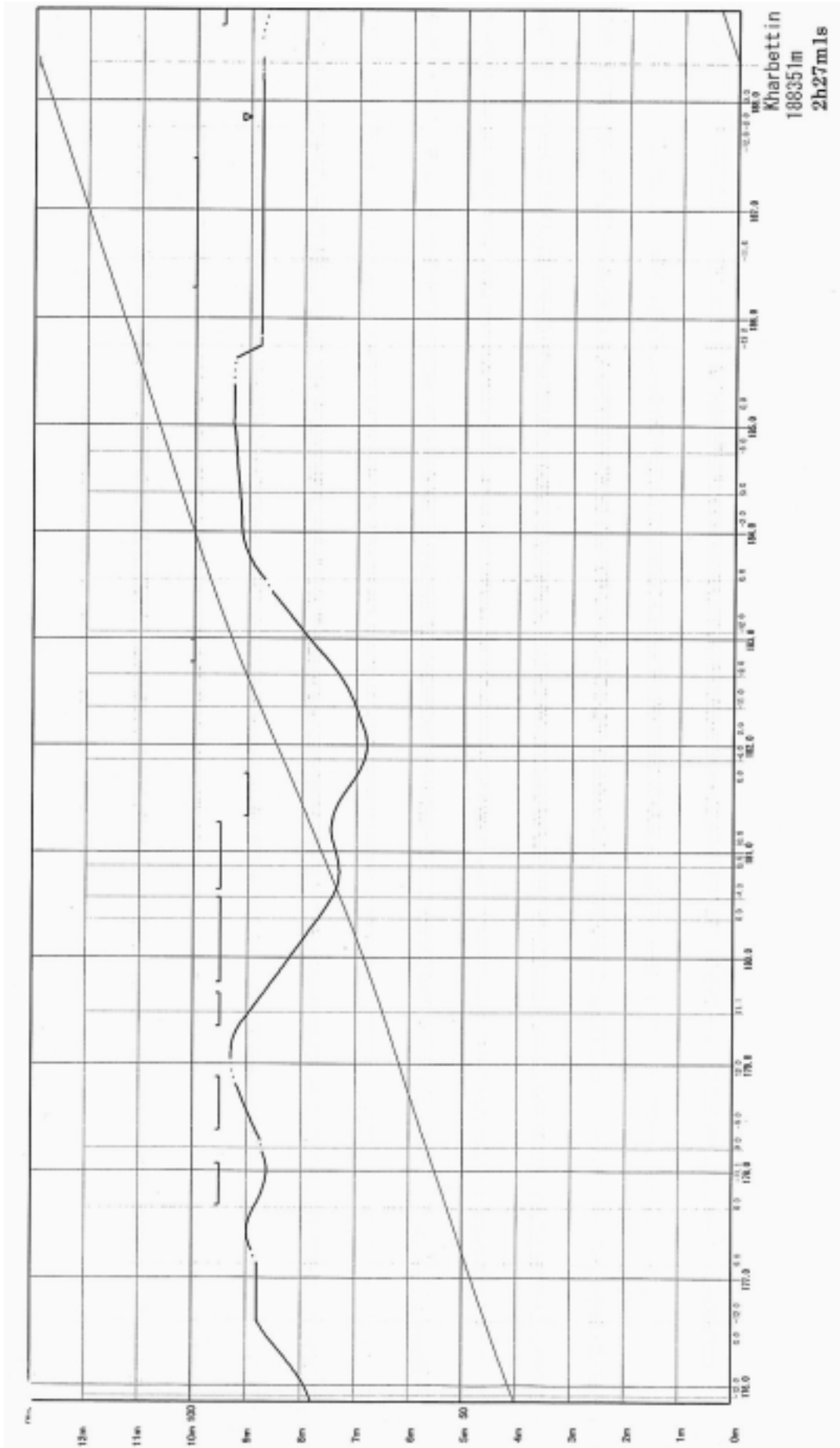


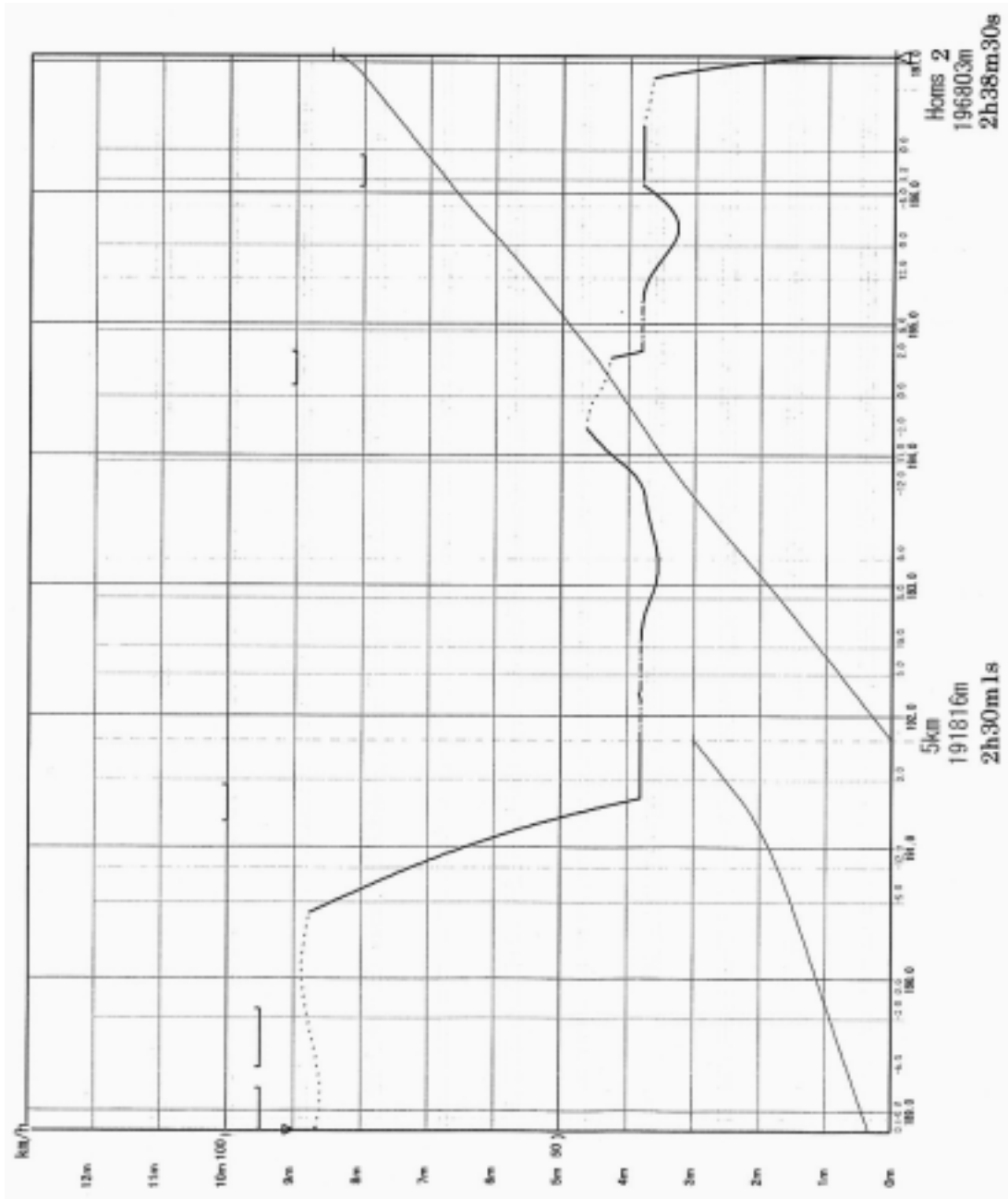






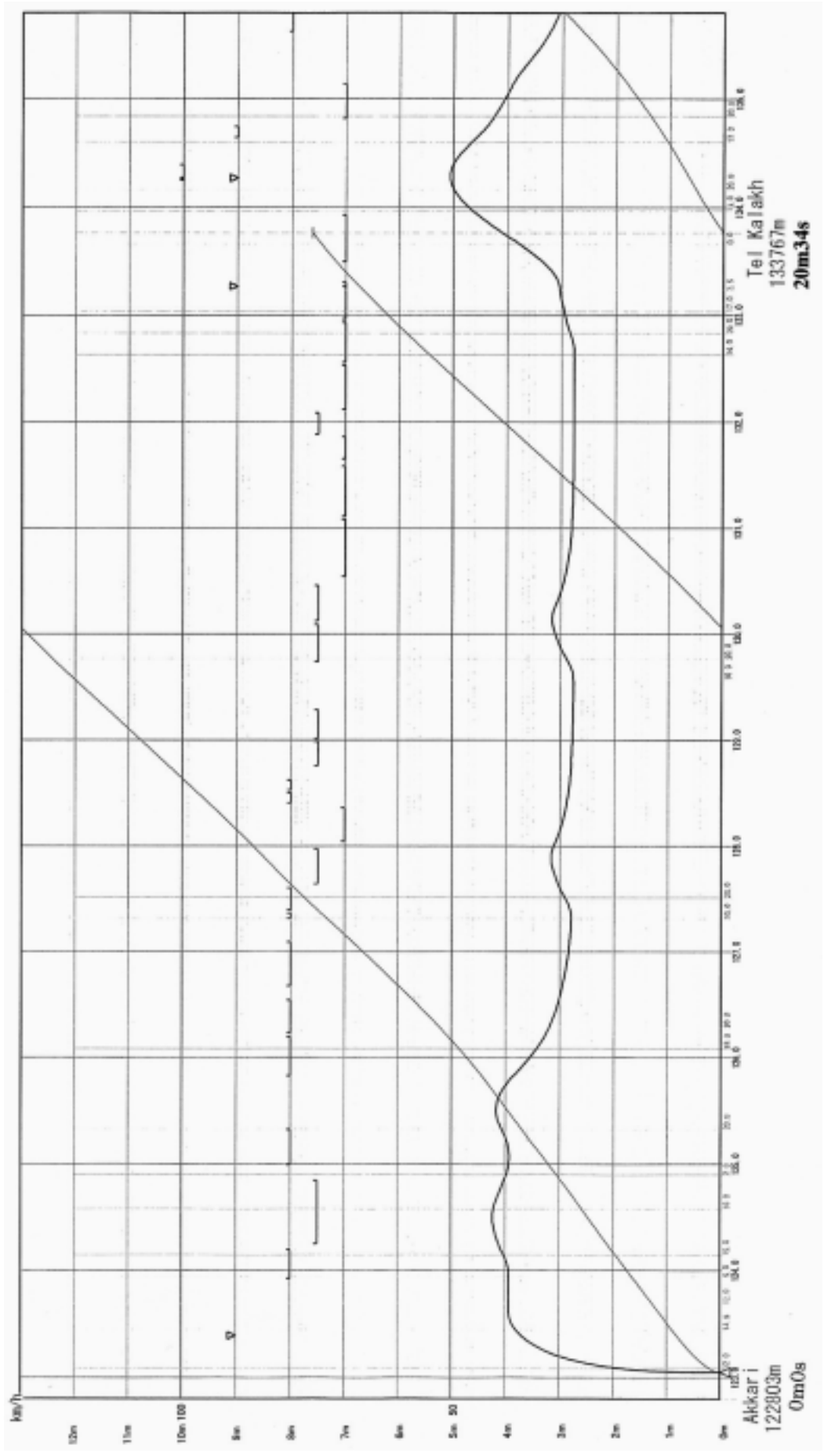


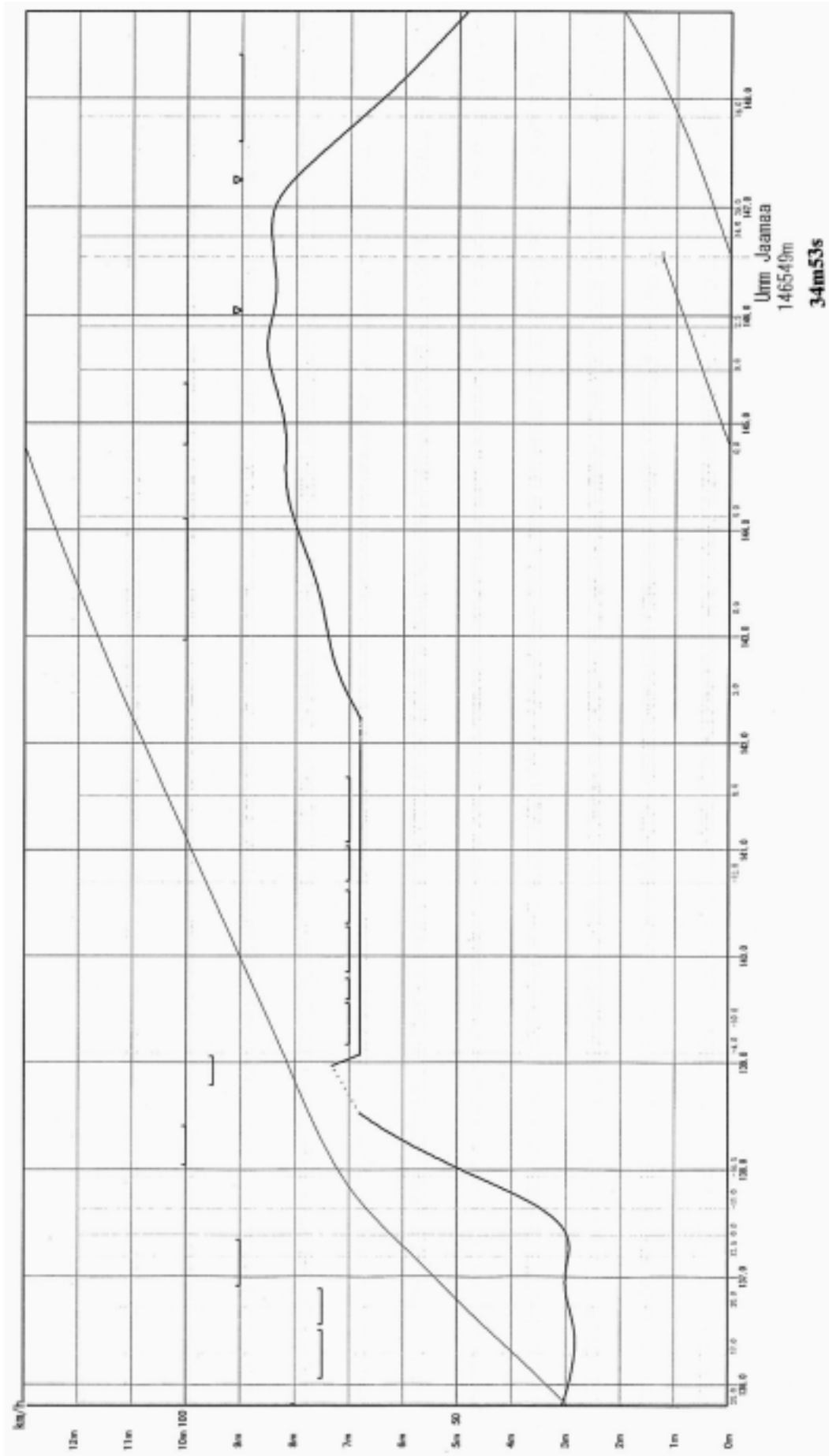




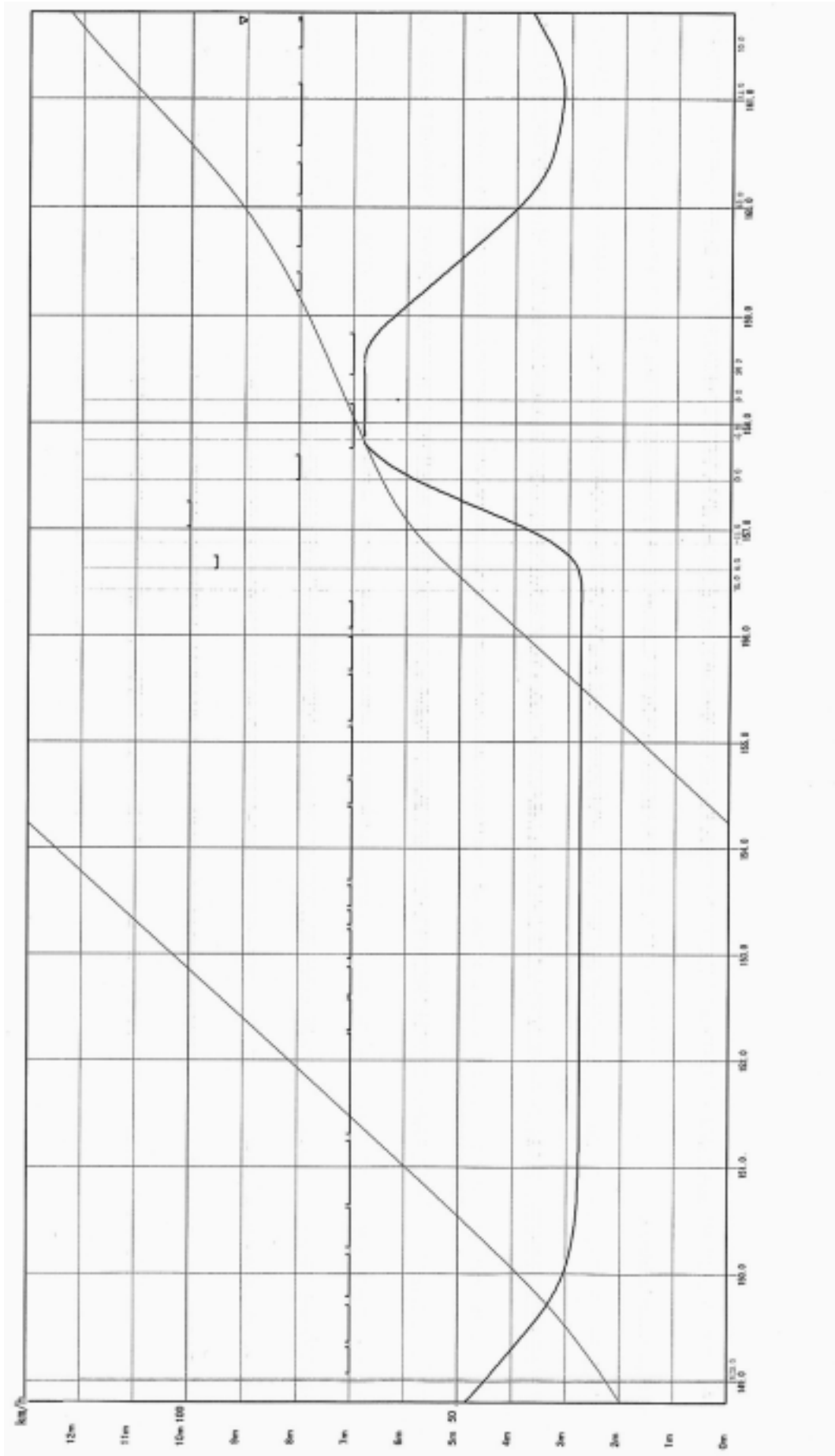
Akkari ~ Al-Khansa Current Line  
 DEL 3200 Type × 2 1,800ton

Station name	Distance(m)	Calculated running time	Standard running time	Accumulated standard running time	Accumulated standard running time (including stopping time)	Average speed between stations(km/h)
Akkari	122,803	0:00:00	0:00:00	0:00:00	0:00:00	
Tel Kalakha	133,767	0:20:34	0:20:45	0:20:45	0:20:45	32.0
Umm Jaamah	146,549	0:14:19	0:14:30	0:35:15	0:35:15	53.6
Al-Khansa	162,229	0:26:40	0:26:45	1:02:00	1:02:00	35.3











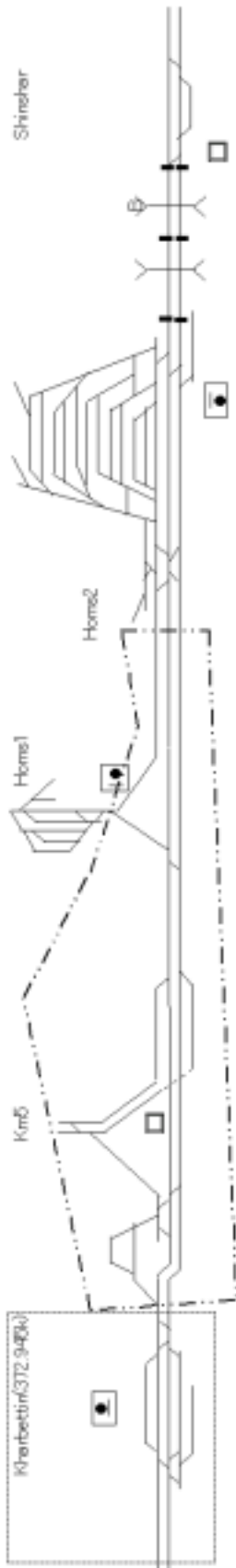
## **Appendix 8**

- Appendix 8.1**    **Amounts of signal and telecommunication equipment and devices for estimation**
- Appendix 8.2**    **Layout of interlocking station**









2005-2010

2010-2015

Interlocking Device(with supplementary C.B)	1	1	
Interlocking Device(with supplementary C.B)			
Interlocking Device(with supplementary C.B)			
Electronics terminal(with supplementary O)	1	53	1
Track circuit (station yard)	36		12
Track circuit (between stations)			4
Colour light signal(station yard with pole)	16	5	6
Colour light signal(station yard without pole)	5	17	2
Colour light signal(between stations with pole)			2
Switch machin	23	45	10
ATS- device	18	9	6
ATS- device	20	38	12
Level crossing warning device(with signals)	7		2
Level crossing gate	4		1
Cables in the station yard(km)	22	20	7
CTC center equipment		1	
CTC station equipment	1	1	
Completed optical fiber cable(km)	3.6		
Cable termination device	1	1	1
STM-1 terminal multiplexer	1	1	1
Data voice multiplexer	1	2	1
Telephone set in a station(inclusive of clock)		1	
Telephone set in a station(inclusive of clock)			
Telephone set in a station(inclusive of clock)	1		1
Telephone box in the station yard	4	8	2
Radio base station	1	1	1
PABX		1	
PABX		1	
Power supply device		1	
Power supply device	1		1
Power supply device			
20kv access power line(km)	0.5		0.3
Passenger guiding device socket	4		7





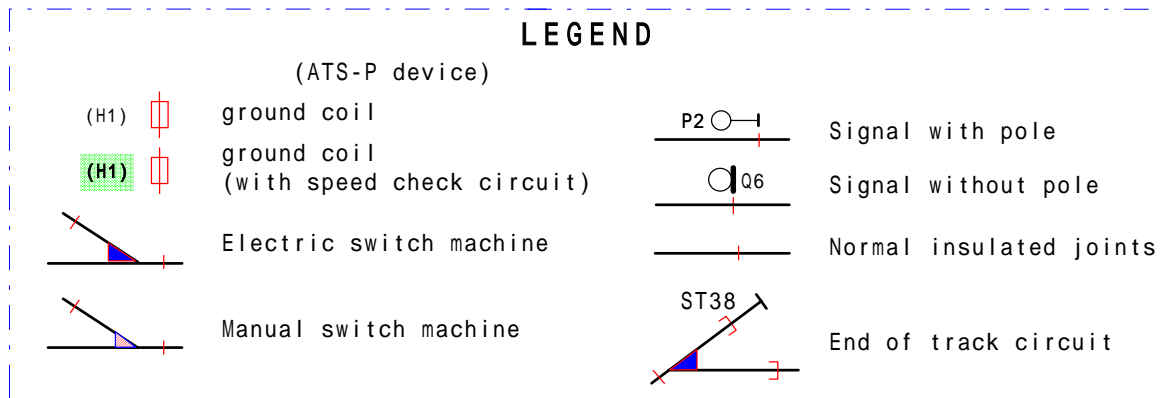


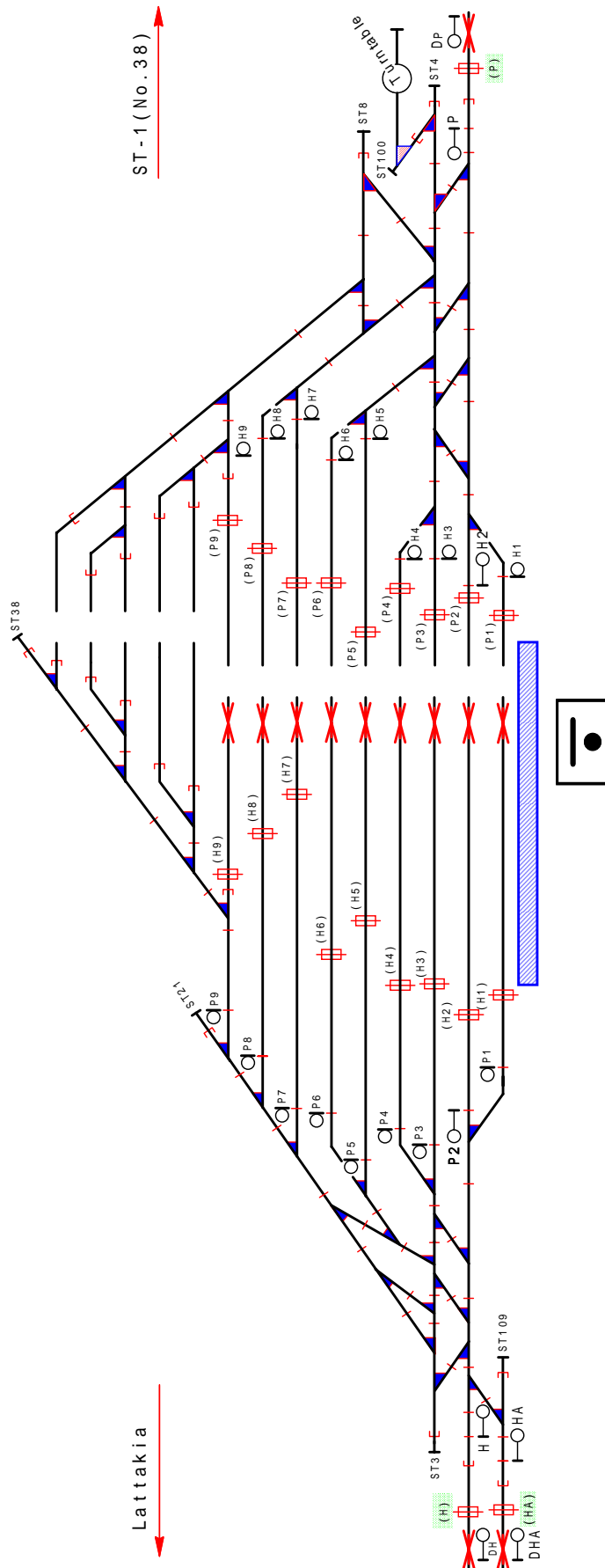
## Appendix 8.2

### Layout of Interlocking Station

- |                                |                    |
|--------------------------------|--------------------|
| (1) Tartous                    | (14) Shinshar      |
| (2) ST - A                     | (15) Khnefis       |
| (3) ST - B                     | (16) Noamia        |
| (4) Samaruyan                  | (17) Mhine         |
| (5) Akkari                     | (18) Al-Rumeila    |
| (6) Tel Kalakh (Alternative A) | (19) ST - C        |
| (7) Tel Kalakh (Alternative B) | (20) Al-Qariyatein |
| (8) Umm Jaamah                 | (21) ST - D        |
| (9) Al-Khansa                  | (22) Al-Barida     |
| (10) Kharbettein               | (23) ST - E        |
| (11) KM 5                      | (24) Al-Bsayra     |
| (12) Homs 1                    | (25) Al-Fajwa      |
| (13) Homs 2                    | (26) Al-Sharqia    |

Note: ST•••Signal Station

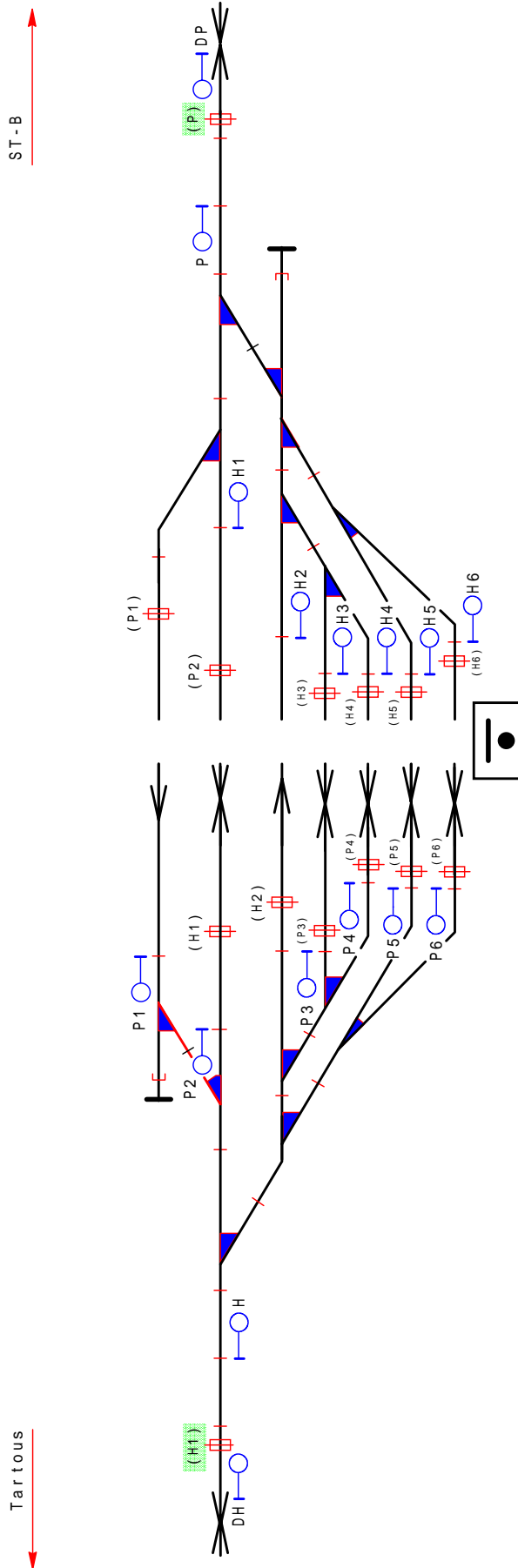




- [Comment]
- (1) SC: With speed check
  - (2) Manual switch machine : 1

**Tartous St .**

Track circuit	59
Color light signal(with pole)	8
Color light signal(without pole)	16
Electric switch machine	50
ATS-device (SC = 3 x 3 = 9)	9
ATS-device(with brake distance)	36
Cable in the station yard (km)	20

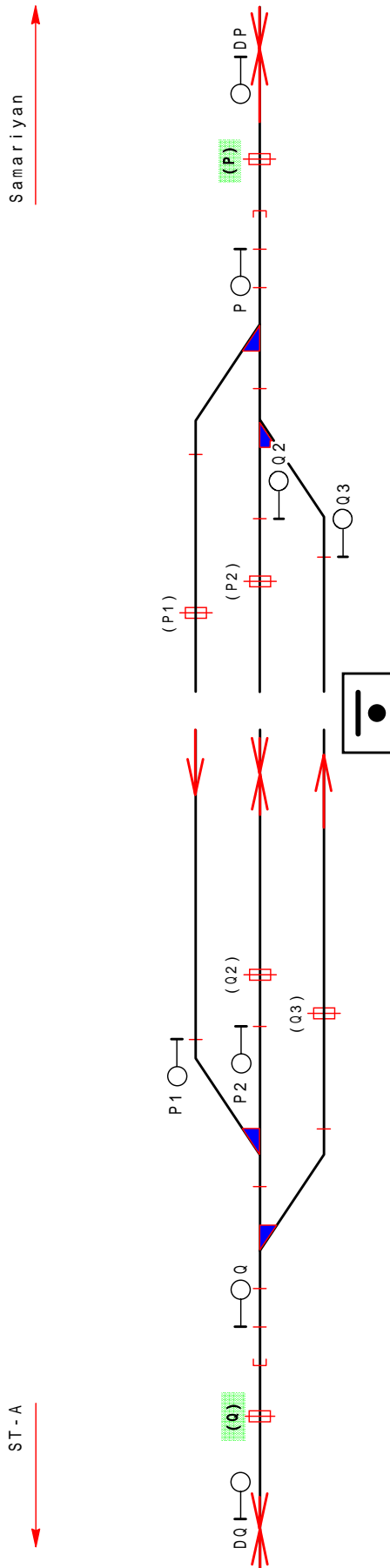


Track circuit	23
Color light signal (with pole)	16
Color light signal (without pole)	0
Electric switch machine	14
ATS-device (SC = 2 x 3 = 6)	6
ATS-device (with brake distance)	16
Cable in the station yard (km)	12

- [Comment]  
 (1) SC: With speed check  
 (2) Manual switch machine : 0

Note: ATS-devices (with brake desistance) include 8 (on front of signal).

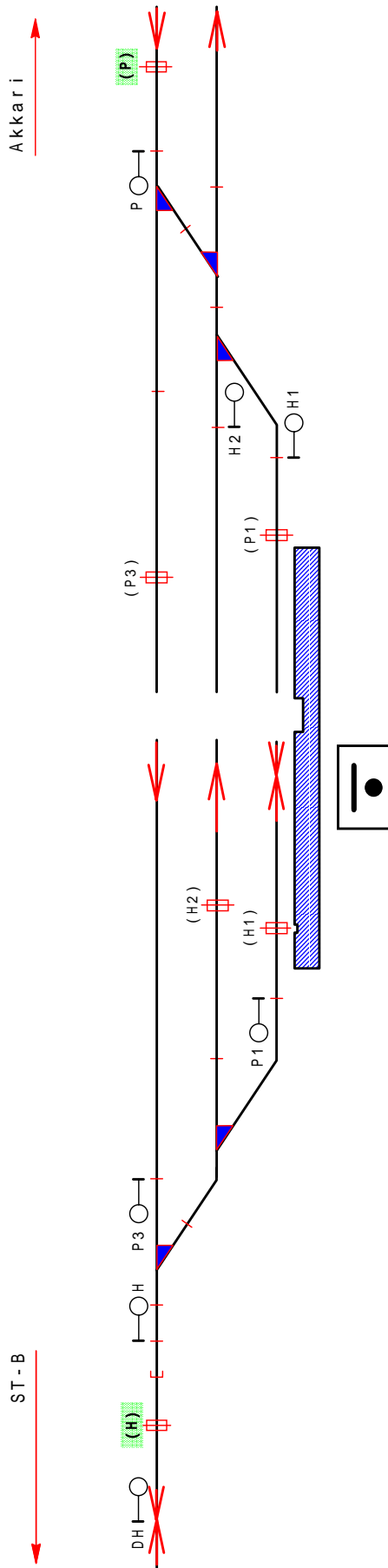
S T - A



Track circuit	11
Color light signal(with pole)	8
Color light signal(without pole)	0
Electric switch machine	4
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

- [Comment]  
 (1) SC: With speed check  
 (2) Manual switch machine : 0

S T - B

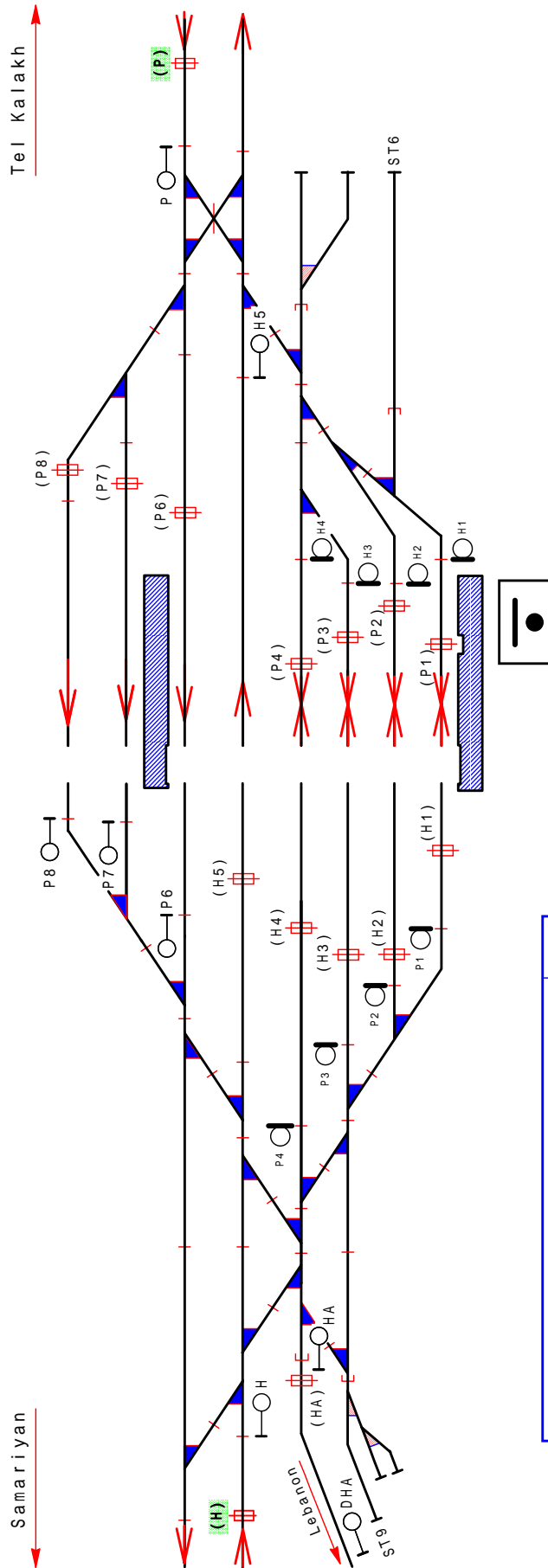


Track circuit	9
Color light signal(with pole)	7
Color light signal(without pole)	0
Electric switch machine	5
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

[Comment]

- (1) SC:With speed check
- (2) Manual switch machine : 0

**Samarriyan St .**

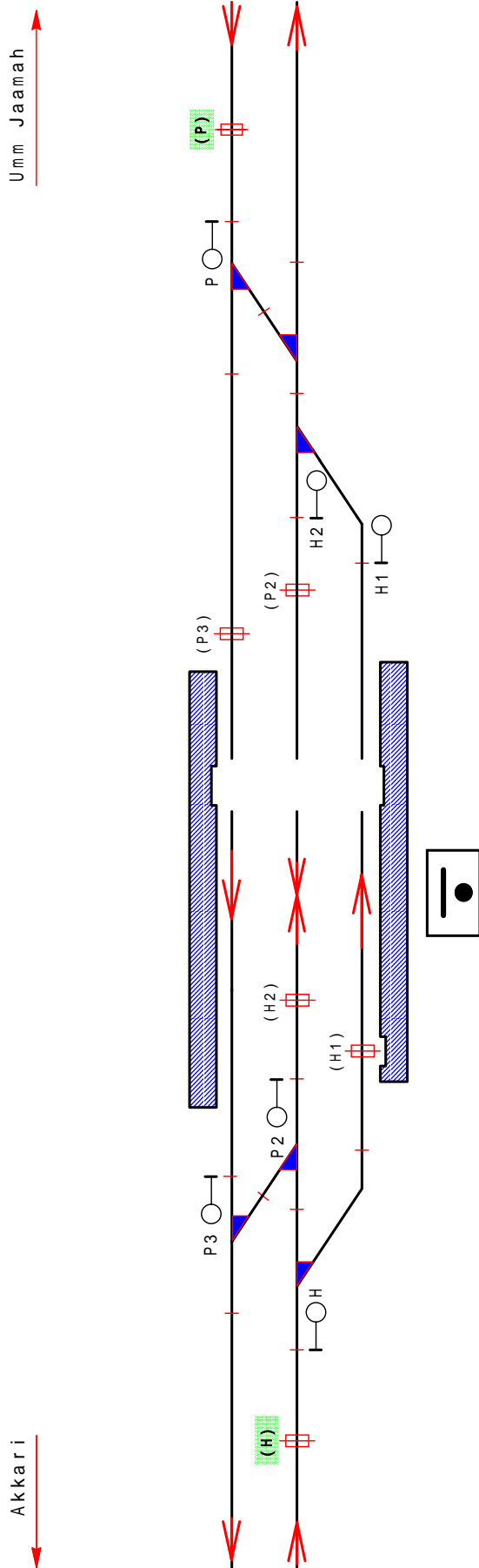


Track circuit	32
Color light signal(with pole)	8
Color light signal(without pole)	8
Electric switch machine	28
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	25
Cable in the station yard ( km )	15

[Comment]

- (1) SC:With speed check
- (2)ATS-device:Front of signal=1(HA)
- (3) Manual switch machine : 3

Akkari St.



Track circuit	9
Color light signal(with pole)	6
Color light signal(without pole)	0
Electric switch machine	6
ATS-device(SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

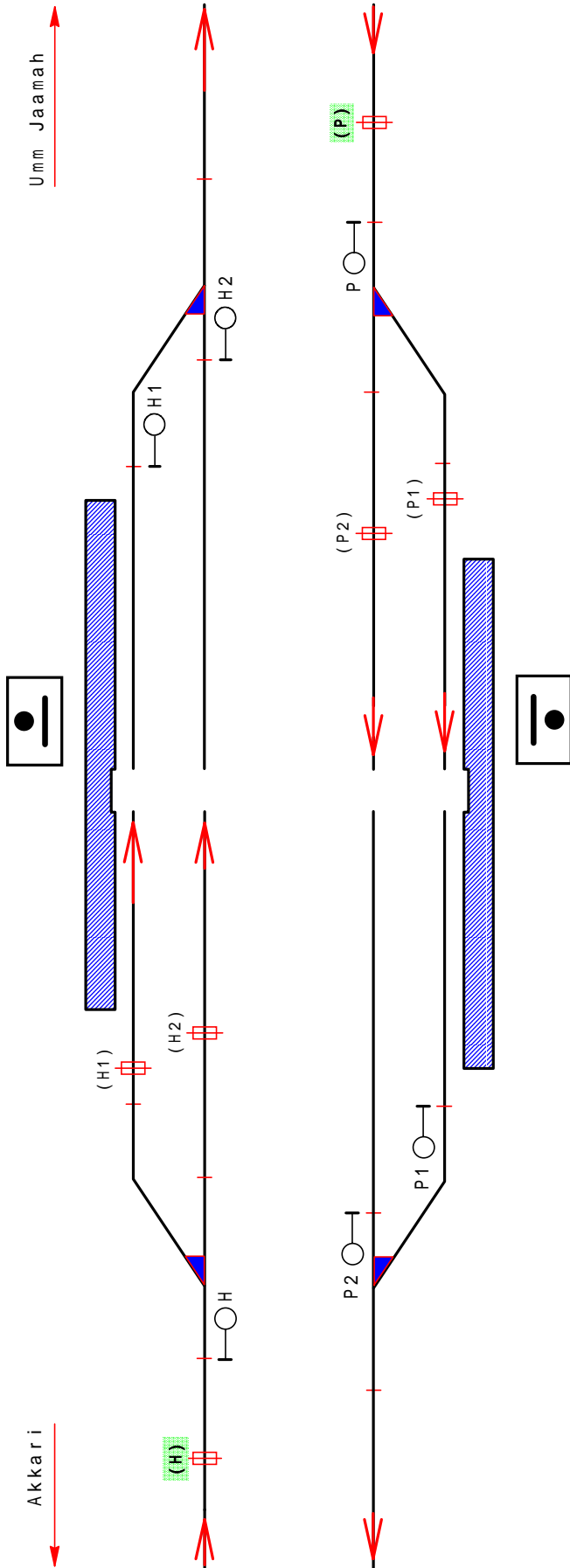
[ Comment ]

- (1) SC: With speed check
- (2) Manual switch machine : 0

**TeI Kalakh St .**  
(Alternative A)



Appendix 8.2 (7)

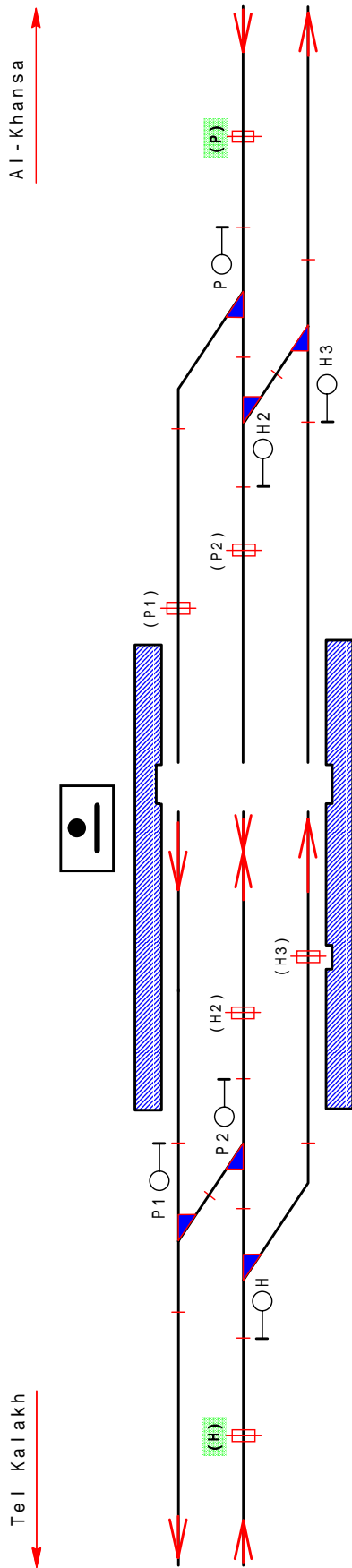


Track circuit	8
Color light signal(with pole)	6
Color light signal(without pole)	0
Electric switch machine	4
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	8

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0

**Te I Kalakh St .**  
(Alternative B)



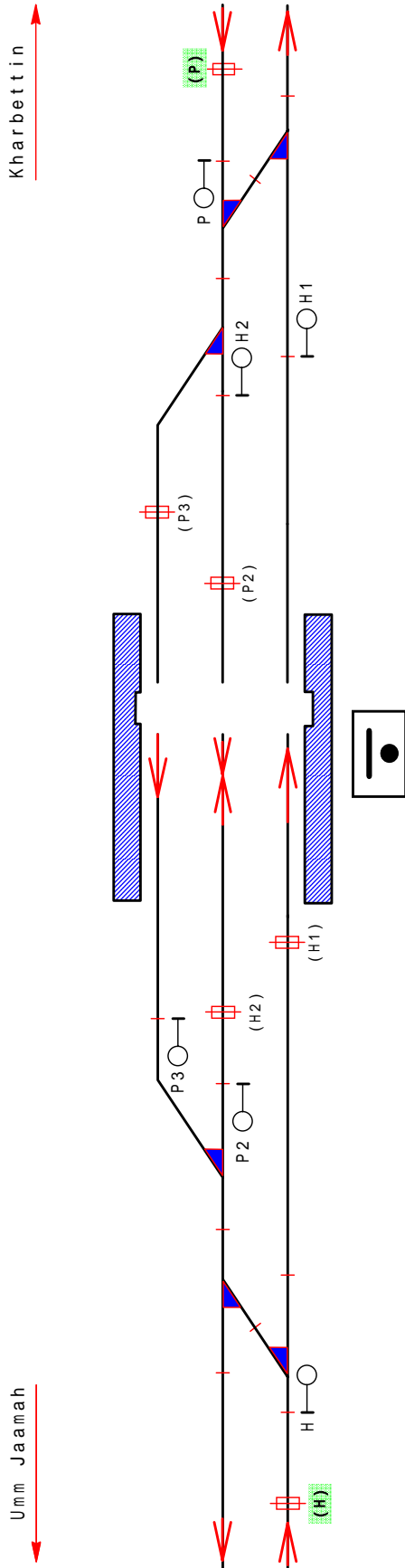
Track circuit	9
Color light signal(with pole)	6
Color light signal(without pole)	0
Electric switch machine	6
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

[Comment]

(1) SC:With speed check

(2) Manual switch machine : 0

Umm Jaamah St .

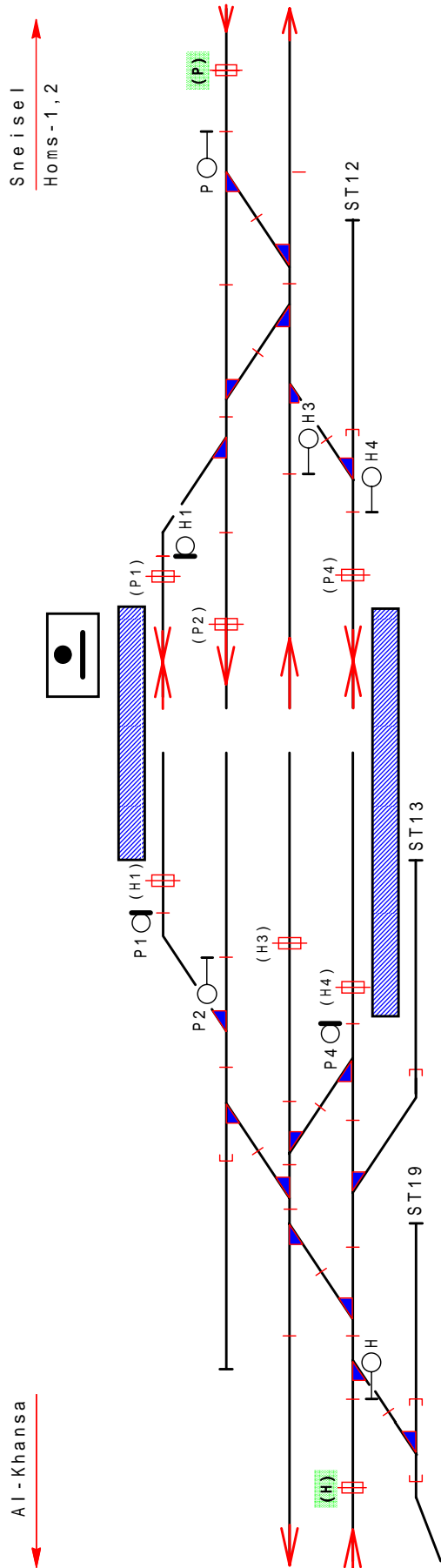


Track circuit	9
Color light signal(with pole)	6
Color light signal(without pole)	0
Electric switch machine	6
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

[Comment]

- (1) SC:With speed check
- (2) Manual switch machine : 0

Al - Khansa St .



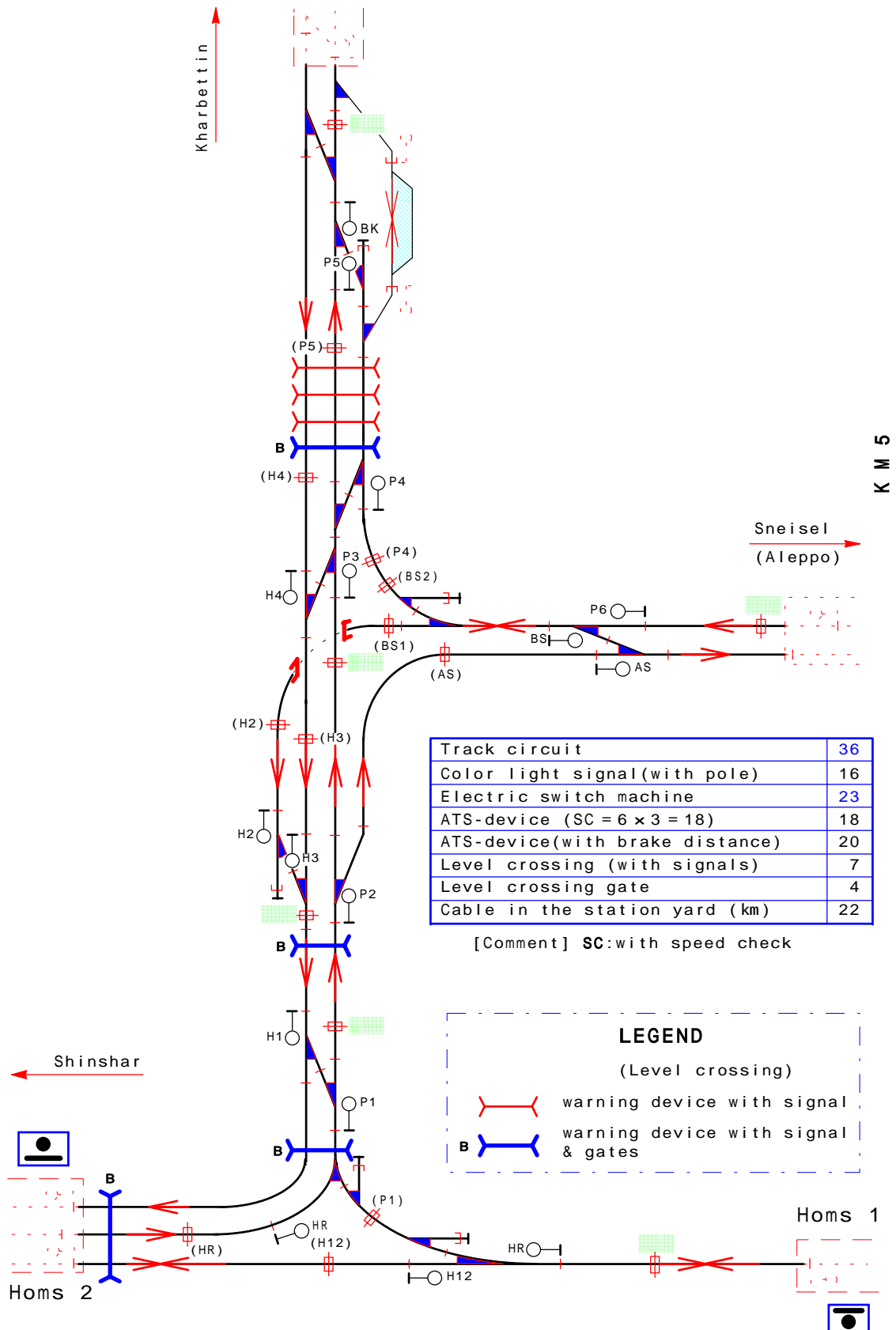
Track circuit	20
Color light signal(with pole)	5
Color light signal(without pole)	3
Electric switch machine	17
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	12
Cable in the station yard ( km)	10

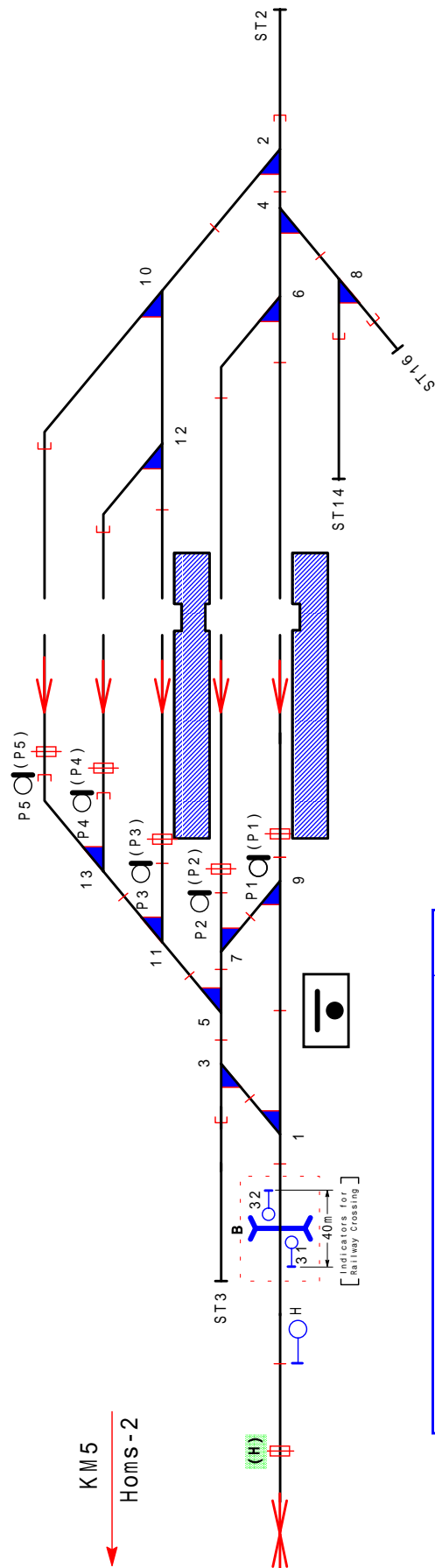
[Comment]

(1) SC:With speed check

(2) Manual switch machine : 0

**Kharbettin St.**

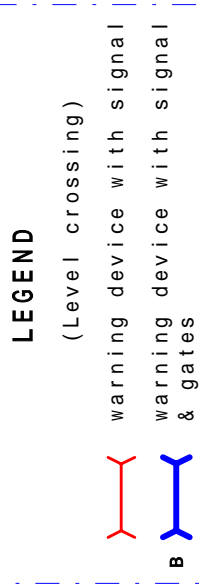




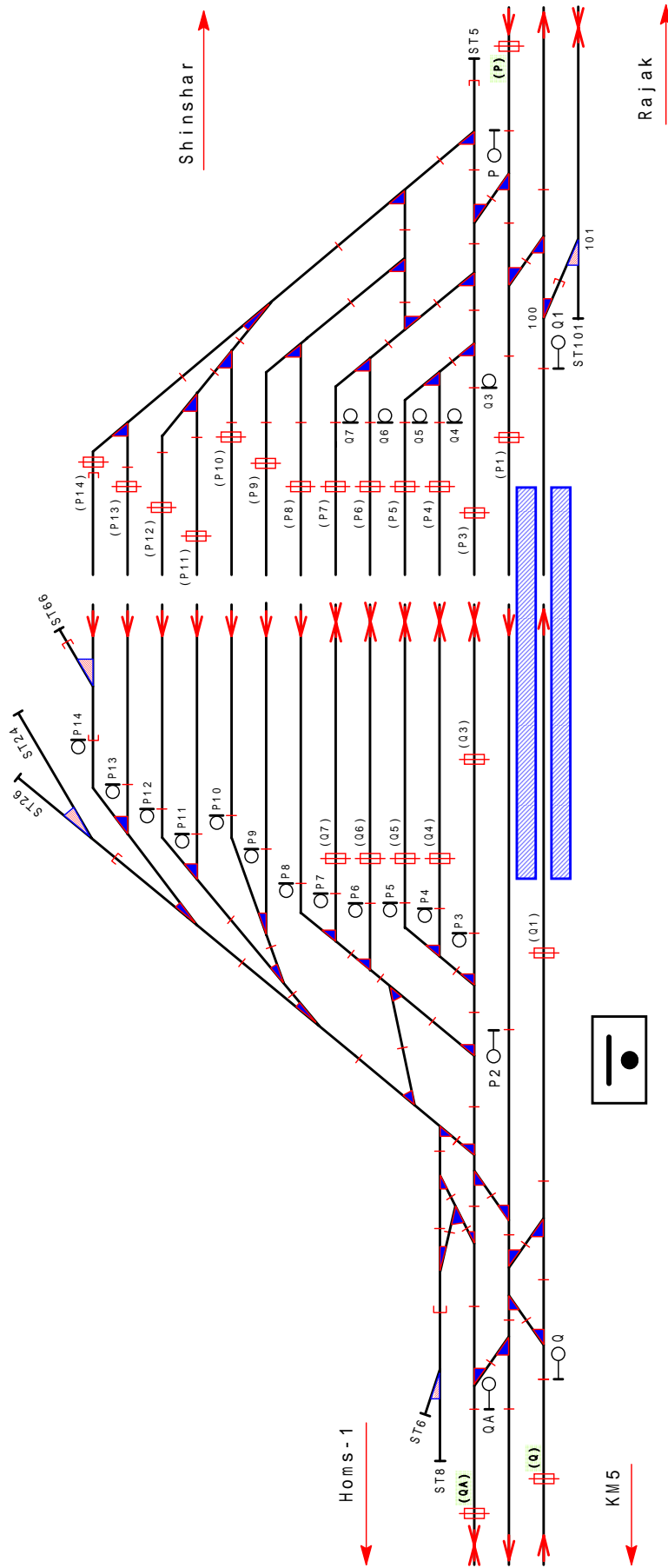
Track circuit	15
Color light signal (with pole)	1
Color light signal (without pole)	5
Electric switch machine	13
ATS-device (SC = 1 x 3 = 3)	3
ATS-device (on front of signal)	5
Cable in the station yard (km)	12
Level crossing (with signals)	1
Level crossing gate	1

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0



Homs - 1 St .

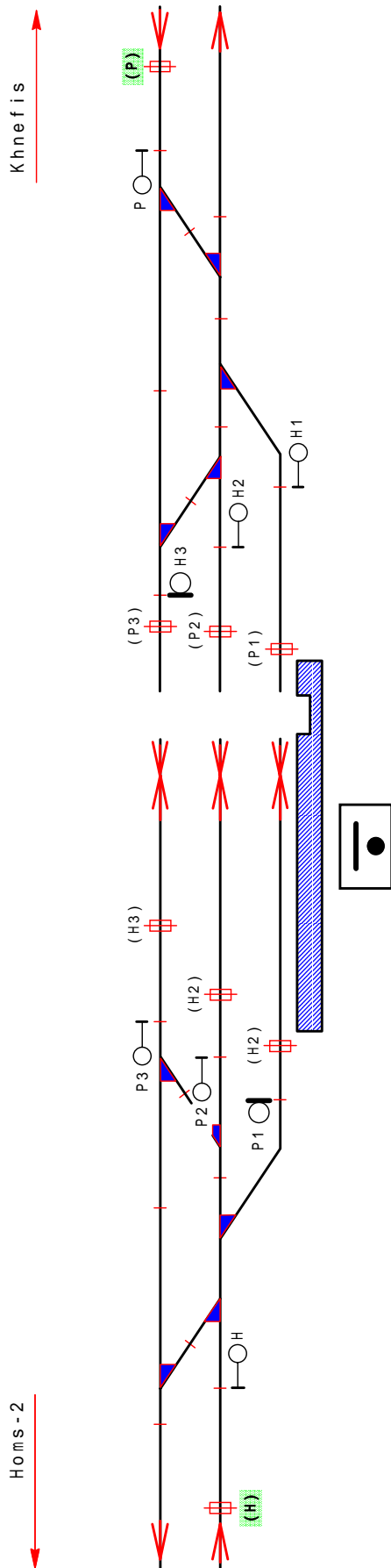


[ Comment ]

- (1) SC: With speed check
- (2) Manual switch machine : 4

Track circuit	53
Color light signal(with pole)	5
Color light signal(without pole)	17
Electric switch machine	45
ATS-device (SC = 3 x 3 = 9)	9
ATS-device(with brake distance)	38
Cable in the station yard (km)	20

Homs-2 St .



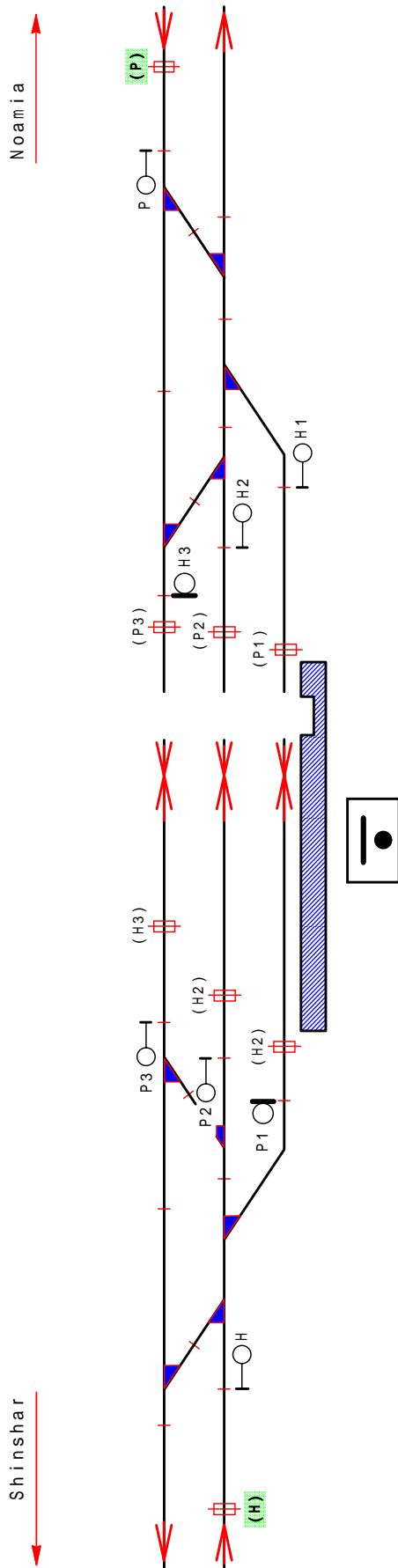
Track circuit	12
Color light signal(with pole)	6
Color light signal(without pole)	2
Electric switch machine	10
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	12
Cable in the station yard (km)	7

[Comment]

- (1) SC:With speed check
- (2) Manual switch machine : 0

Shinshar St .





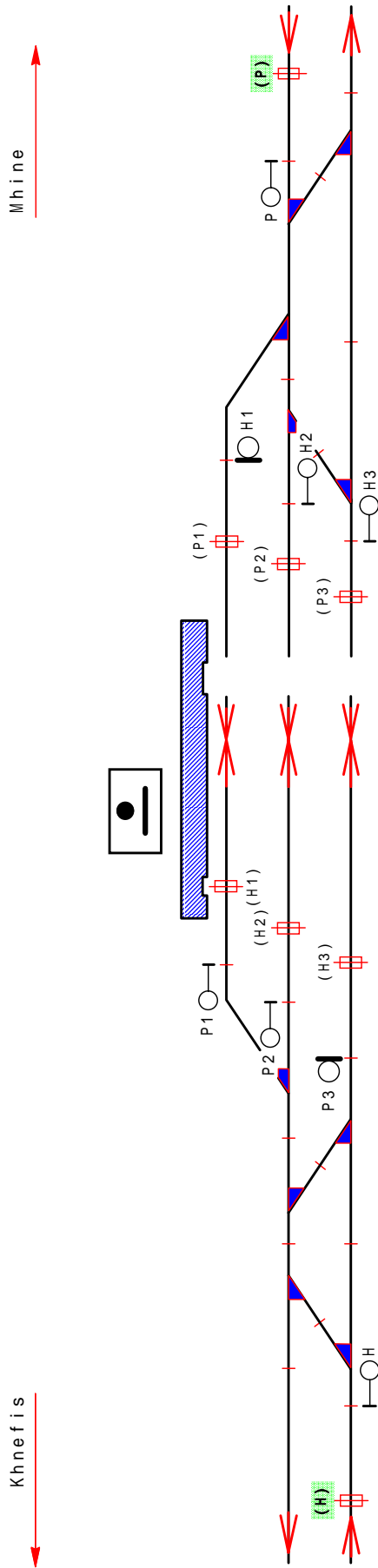
Track circuit	12
Color light signal(with pole)	6
Color light signal(without pole)	2
Electric switch machine	10
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	12
Cable in the station yard (km)	7

[Comment]

(1) SC:With speed check

(2) Manual switch machine : 0

Khnefis St .

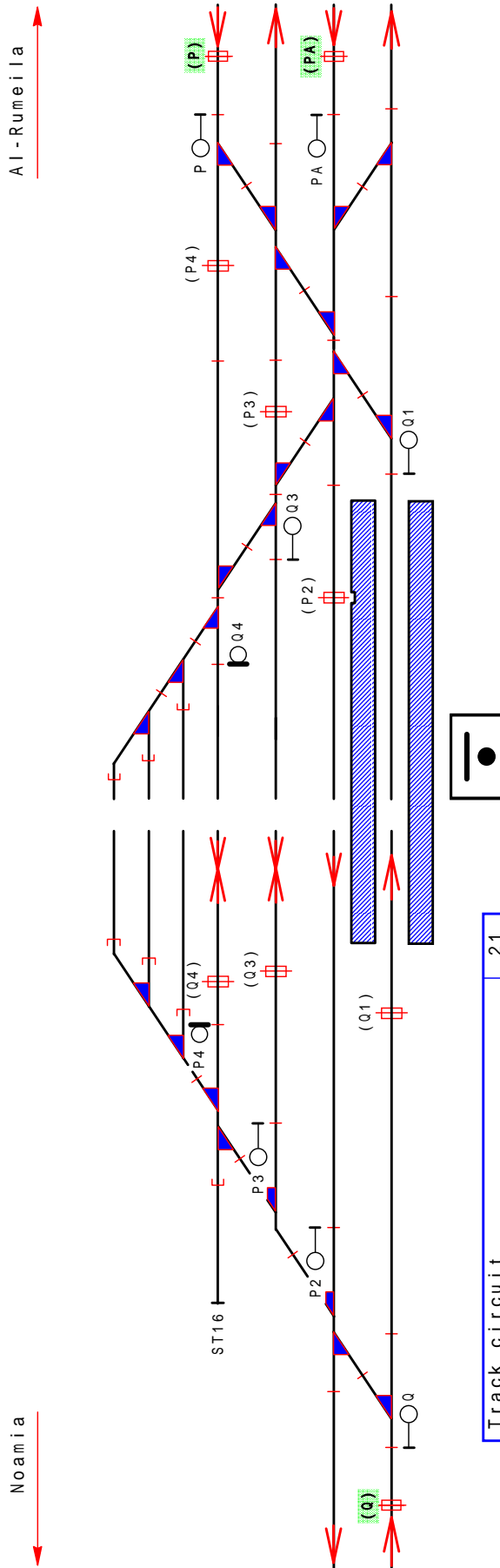


Track circuit	12
Color light signal (with pole)	6
Color light signal (without pole)	2
Electric switch machine	10
ATS-device (SC = 2 x 3 = 6)	6
ATS-device (with brake distance)	12
Cable in the station yard (km)	7

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0

Noamia St .

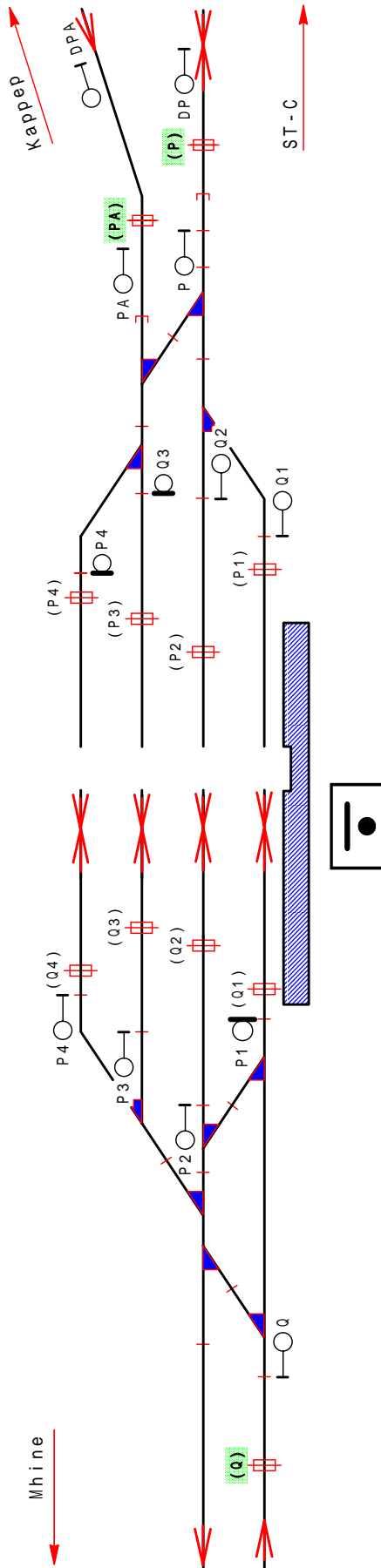


Track circuit	21
Color light signal(with pole)	7
Color light signal(without pole)	2
Electric switch machine	23
ATS-device (SC = 3 x 3 = 9)	9
ATS-device(with brake distance)	12
Cable in the station yard ( km)	15

[Comment]

- (1) SC:With speed check
- (2) Manual switch machine : 0

Mhine St .

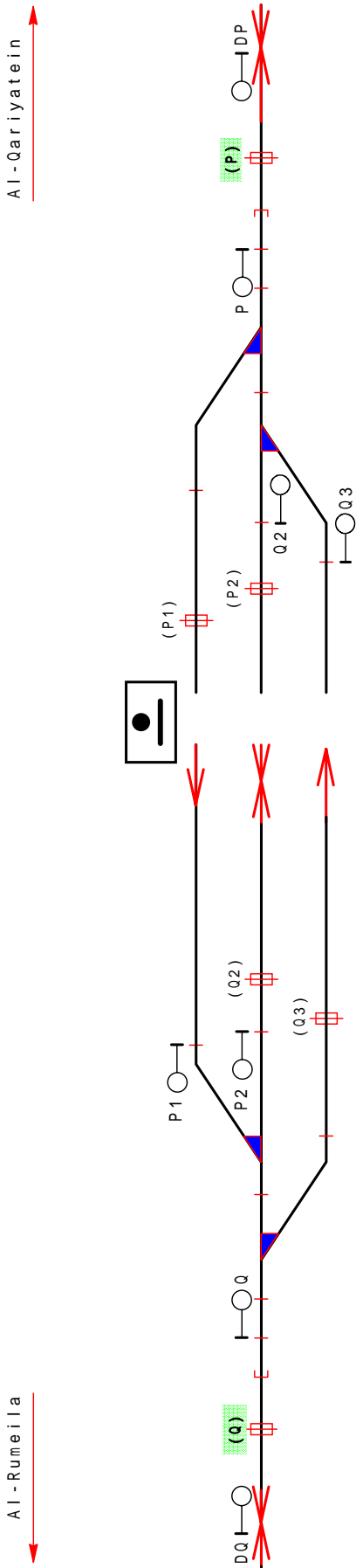


Track circuit	14
Color light signal(with pole)	10
Color light signal(without pole)	3
Electric switch machine	10
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	17
Cable in the station yard (km)	7

[Comment]

- (1) SC: With speed check
- (2) ATS-device: Front of signal=1 (PA)
- (3) Manual switch machine : 0

Al - Rumeila St .

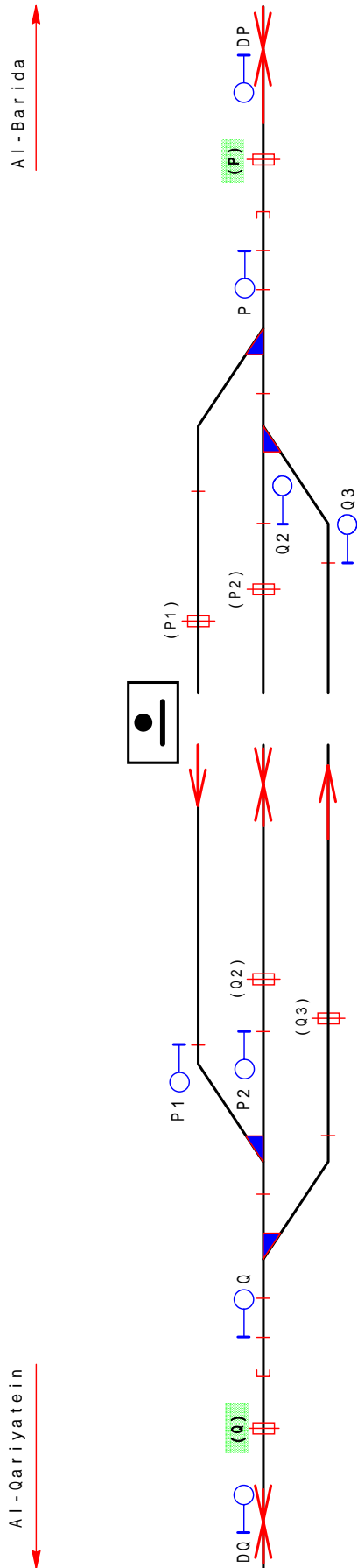


Track circuit	11
Color light signal(with pole)	8
Color light signal(without pole)	0
Electric switch machine	4
ATS-P device (SC = 2 x 3 = 6)	6
ATS-P device(with brake distance)	8
Cable in the station yard ( km )	7

- [Comment]
- (1) SC: With speed check
  - (2) Manual switch machine : 0

S T - C



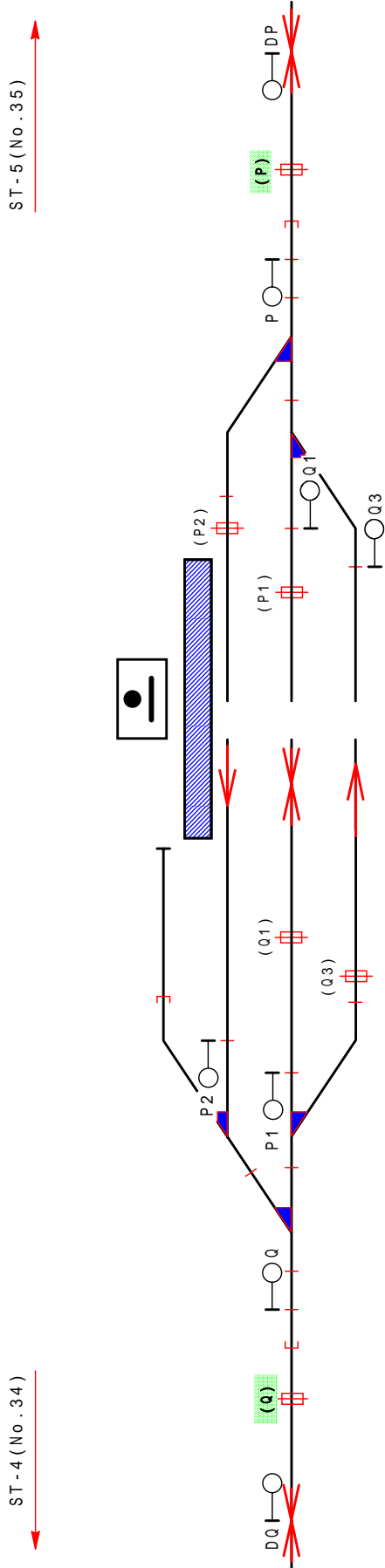


Track circuit	11
Color light signal(with pole)	8
Color light signal(without pole)	0
Electric switch machine	4
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	8
Cable in the station yard (km)	7

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0

S T - D

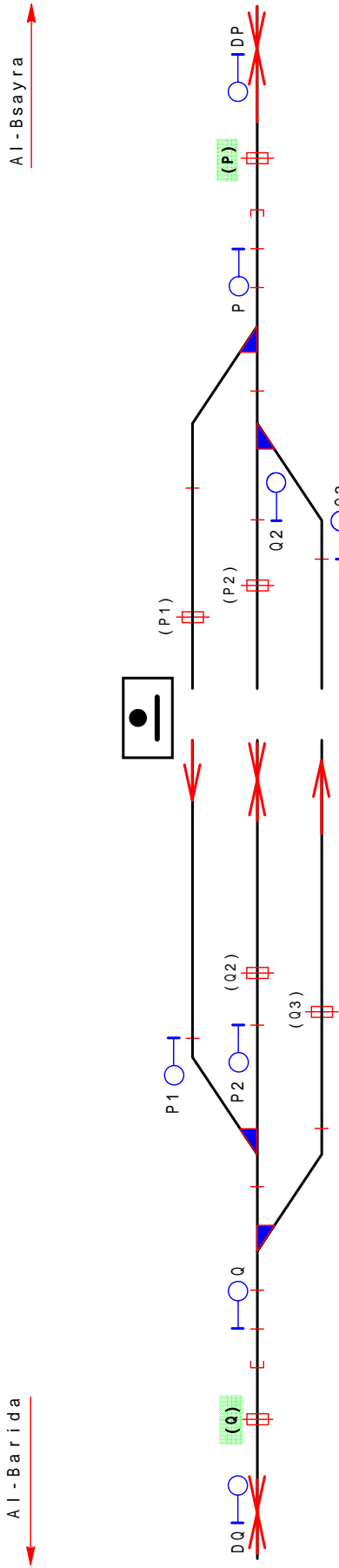


Track circuit	12
Color light signal (with pole)	8
Color light signal (without pole)	0
Electric switch machine	5
ATS-device (SC = 2 x 3 = 6)	6
ATS-device (with brake distance)	8
Cable in the station yard (km)	7

[Comment]  
 (1) SC: With speed check  
 (2) Manual switch machine : 0

Al-Barida St.



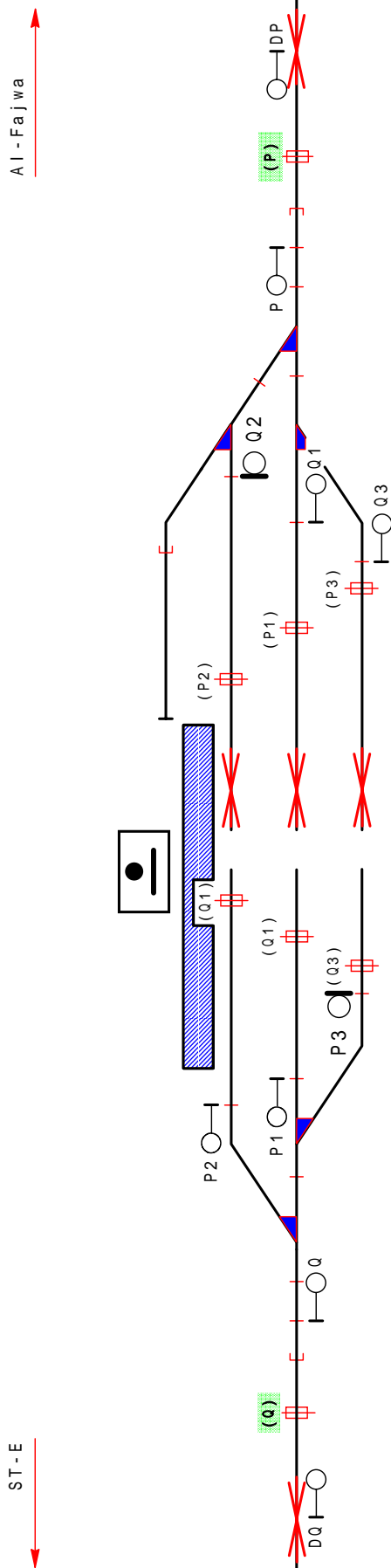


Track circuit	11
Color light signal (with pole)	8
Color light signal (without pole)	0
Electric switch machine	4
ATS-device (SC = 2 x 3 = 6)	6
ATS-device (with brake distance)	8
Cable in the station yard (km)	7

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0

S T - E



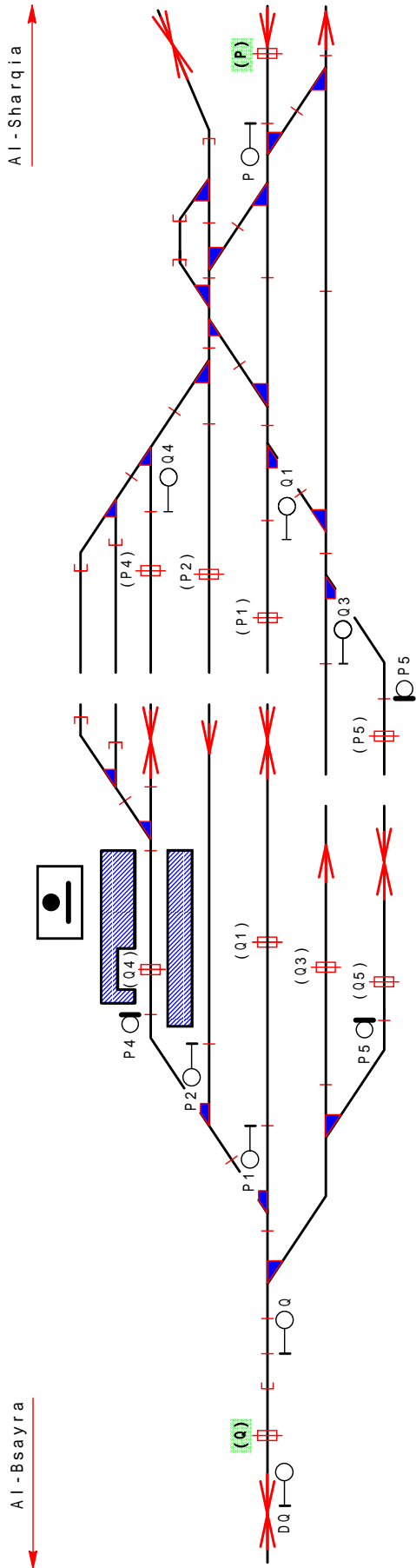
Track circuit	12
Color light signal(with pole)	8
Color light signal(without pole)	2
Electric switch machine	5
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	12
Cable in the station yard (km)	7

[Comment]

(1) SC:With speed check

(2) Manual switch machine : 0

Al-Bsayra St .

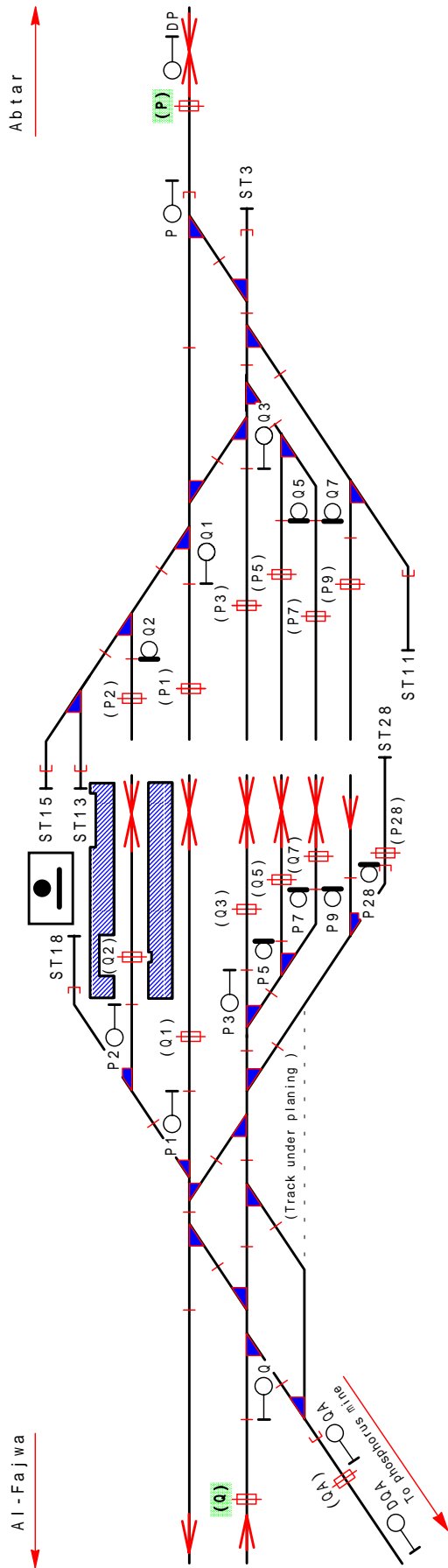


Track circuit	25
Color light signal(with pole)	8
Color light signal(without pole)	3
Electric switch machine	20
ATS-device (SC = 2 x 3 = 6)	6
ATS-device(with brake distance)	16
Cable in the station yard (km)	10

[Comment]

- (1) SC: With speed check
- (2) Manual switch machine : 0

Fajwa St .



[Comment]

- (1) SC: With speed check
- (2) ATS-device: Front of signal=2(P28, QA)
- (3) Manual switch machine : 0

Al-Sharqia St.