

SY

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SY/T 10011-2006

Guide to programing overall development program for oil fields

油田总体开发方案编制指南

(English Translation)

Issued on: January 19, 2017

Implemented on: May 1, 2017

**Issued by: National Railway Administration of the People's Republic of
China 3.No action is required - Full-copy of this**

Table of Contents

Foreword...	4
1 General provisions..	9
2 Terms and symbols..	11
2.1 Terms...	11
2.2 Codes..	13
2.3 Abbreviations..	13
3 Fixed lineside signal...	15
3.1 General requirements...	15
3.2 Setting principle...	15
3.3 Indication requirements...	20
3.4 Signaling mechanism and lighting configuration...	23
3.5 Signal marker..	24
4 Track occupancy inspection device...	25
4.1 General requirements...	25
4.2 Track circuit...	28
4.3 Track occupancy inspection device with axle counter...	32
5 Turnout switching device...	33
6 Interlocking...	34
6.1 General requirements...	34
6.2 Interlocking relationship...	34
6.3 Centralized interlocking for shunting area on level tracks...	42
6.4 Centralized interlocking combined circuit..	42
7 Blocking...	43
7.1 General requirements...	43
7.2 Semi-automatic blocking..	43
7.3 Automatic station blocking..	44
7.4 Automatic blocking...	44
8 Train operation control...	46
8.1 General requirements...	46
8.2 CTCS lineside equipment...	47
8.3 CTCS level transition..	51
8.4 Signaling safety data network...	51

Foreword

On the basis of TB 10007-2006 Code for design of railway signaling, this Code was hereby reviewed and revised through extensive solicitation, comprehensively summarizing the experience in China's railway signaling engineering construction, usage management and equipment maintenance in recent years, and fully absorbing relevant scientific research achievements. This Code is divided into 19 chapters, including general provisions, terms and symbols, fixed lineside signal, track occupancy inspection device, turnout switching device, interlocking, blocking, train operation control, coding, train dispatching and commanding (TDC) & centralized traffic control (CTC), centralized signaling monitoring (CSM), hump signaling and marshalling station automation, crossing signaling, shunting train protection (STP), switch snow-melting device, electrical power unit (EPU), optical cables, operating environment, interface design, etc.

The main contents of preparation and revision in this Code are as follows.

1 MODIFY the scope of application in the chapter General provisions to

"applicable to the design of standard-gauge railway signaling engineering".

2 ADD the chapter Terms and symbols to define the terms, codes and

abbreviations used in this Code.

3 MODIFY the signal mechanism and lighting configuration, supplemented

with signal marker, in the chapter Fixed lineside signal.

4 MODIFY the original chapter name Track inspection device to Track

occupancy inspection device; DELETE the contents related to JZXC-480

AC continuous track circuit as well as 4-information, 8-information, 12-information, 18-information audio frequency shift modulated track circuits;

DELETE the content of equipment parameters unrelated to engineering design; ADD the requirements for the length of track section;

COMPLEMENT the contents with regard to ZPW-2000 series track circuit and asymmetrical high-voltage impulse track circuit; MODIFY the contents of track occupancy inspection device with axle counter.

5 MODIFY the original chapter name Switching device to Turnout switching

device; DELETE the contents concerning the interlock switching device by electric locks; DELETE the construction installation content.

6 MODIFY the original chapter name Interlocking within stations to

Interlocking; INCLUDE the relevant content of original TB 10071-2000

Code for design of railway signaling interlocking within stations into this chapter; DELETE the content of non-centralized interlocking, fly-shunting for shunting area on level tracks, etc.; COMPLEMENT the design requirements of computer based interlocking (CBI).

7 MODIFY the original chapter name Section blocking to Blocking; MODIFY

the relevant contents of block design.

8 ADD the chapter Train operation control, defining the requirements for

CTCS-2 and CTCS-3 level engineering design.

9 ADD the chapter Coding; INCLUDE the relevant content of original "cab

signaling and automatic train protection (ATP)" into this chapter;

COMPLEMENT the design requirements of CTCS-2 and CTCS-3 level coding.

10 MODIFY the original chapter name Transportation dispatching and

commanding to Train dispatching and commanding (TDC) & centralized traffic control (CTC); INCLUDE the relevant content of Interim Provisions on Design of Railway Train Dispatching and Commanding (TDC) & Centralized Traffic Control (CTC) System (Construction Management Division, Ministry of Railways?2007?No. 205) issued by the former Ministry of Railways into this chapter.

11 The original section Monitoring and warning in the chapter Housing and

others becomes a separate chapter, entitled Centralized signaling monitoring (CSM); COMPLEMENT the content of centralized signaling monitoring (CSM).

12 MODIFY the original chapter name Hump signaling to Hump signaling and

marshalling station automation, with a specific reference to TB 10069 Code for design of railway hump signaling and automation system for marshalling station.

13 MODIFY the original chapter name Section crossing signaling to Crossing

signaling; COMPLEMENT the design content of crossing signaling within stations.