XBT-DBT data for standard depth

1 File Name

xxyynn.T

where, xx: Hydrographic Code [listed in Table1]
         yy: Year (last 2 digits)
         nn: Consecutive number (Month; Before winter of 2010)

2 Format of File

XBT-DBT data for standard depth(hereinafter referred to as XBT-DBT(STD) data) consist of ASCII records of fixed lengths (126 bytes). Each record is separated by two characters like as in DOS, which characters are one "control M" (carriage return, ASCII code 0Dh) and one "control J" (line feed, ASCII code 0Ah). For a missing value, the character '-'(ASCII code 2Dh) is put in place of the measured value. The column of the element that was not observed is filled with blanks.

XBT-DBT(STD) data consist of cruise information record (HEADER) and subsurface temperature data records (DATA) obtained during the cruise. The character '@' on the "REC_IND" of DATA represents the end record of the station data group.

HEADER (Cruise Information)

Element	Start Position	Field Type	Description of Field
FORMAT CODE	1	A4	Format code of the file: 'Tx.x'
CRUISE NO	6	I4	Cruise number identified with the year and the month.
PERIOD	11	2(2I2,1X)	Date of beginning and end of the subsurface temperature observations.
AREA	21	A98	Observation area.
NO OF STN	119	I4	Number of stations.
SHIP CODE	124	A2	Hydrographic Code (listed in Table 1.).
REC_IND	126	A1	'@'

DATA

Element	Start Position	Field Type	Description of Field
STATION NO	1	A3,I3	Station number given by the bt code suffixed with three digits consecutive numbers.
DATE/TIME	8	2(2I2,1X)	Month, day and time of an observation in JST.
LATITUDE	18	I2,1X,I2,I1,A1	Degrees, minutes and tenths of minutes (if given) of latitude, N or S.
LONGITUDE	26	I3,1X,I2,I1,A1	Degrees, minutes and tenths of minutes (if given) of longitude, E or W.
TEMP 0 (500)	35	F4.1	Temperature determined with a

Element	Start Position	Field Type	Description of Field
10 (550)	40	F4.1	"bathythermograph" at each depths
20 (600)	45	F4.1	in degrees centigrade.
30 (650)	50	F4.1	
50 (700)	55	F4.1	
75 (750)	60	F4.1	
100 (800)	65	F4.1	
150 (900)	70	F4.1	
200(1000)	75	F4.1	
250(1200)	80	F4.1	
300(1400)	85	F4.1	
350(1600)	90	F4.1	
400(1800)	95	F4.1	
450(2000)	100	F4.1	
SURF-SAL	105	F6.3	Surface salinity in PSS-78.
ACM-NO	112	A3,I3	Corresponding station number of the subsurface current data.
PROBE TYPE	119	I3	Probe code, WMO code table 1770 (Table 3).
INST. TYPE	122	I2	Instrument code, WMO code table 4770 (Table 2).
TYP	125	A1	Type of "bathythermograph"(BT): (X: expendable BT, D: Digital BT.)
REC_IND	126	A1	'@' or '='

Table 1: Ship codes.

Ship Name	Hydrographic	Subsurface current	BT
Kofu Maru	KH/KO	AH/AO	TH/TO
Ryofu Maru	RF	AF	TF
Keifu Maru I	KE	AE	TE
Keifu Maru II	KS	AS	TS
Shumpu Maru	SH	AH	TH
Chofu Maru	NC	AC	TC
Seifu Maru	SM	AM	TM

Table 2: Instrument codes for observation using expendable probe in Subsurface temperature data.

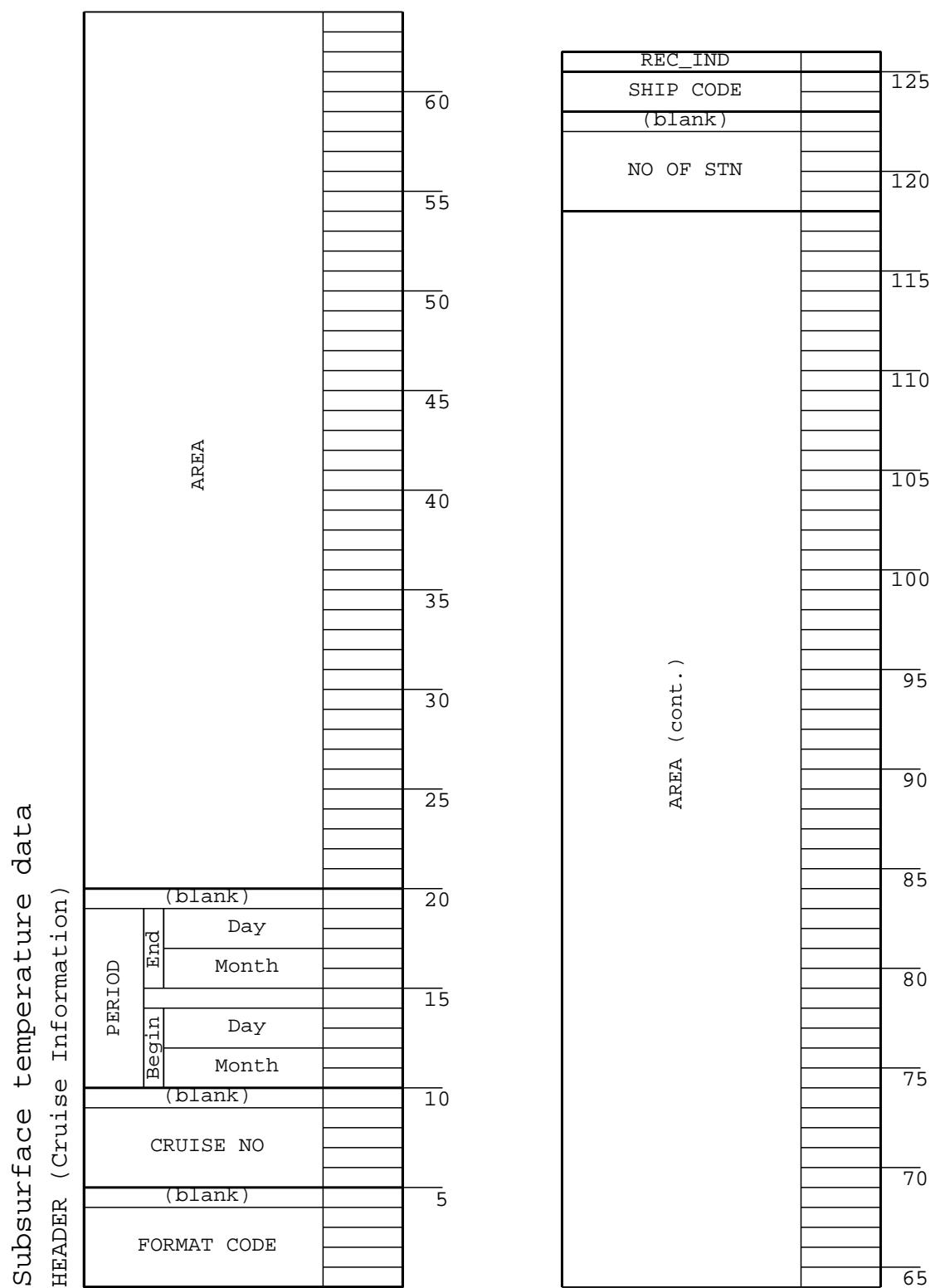| Code	Instrument
32	Murayama Denki Z-60-16-III
33	Murayama Denki Z-60-16-II
45	Tsurumi Seiki Co. MK-100
46	Tsurumi Seiki Co. MK-130 Compatible recorder

Table 3: Probe code and coefficients of the depth-time equation in Subsurface temperature data. The depth-time equation is of the form:

$$z_m = a_m * t + b_m * t^2$$

where z_m is the depth and t is the elapsed time in seconds starting when the probe hits the surface; a_m and b_m are constants.

Code	Manufacturer	Probe Type	coefficients a_m	b_m
212	Tsurumi Seiki Co.	T-6	6.691	-0.00225
222	Tsurumi Seiki Co.	T-7	6.691	-0.00225
231	Tsurumi Seiki Co.	T-5	6.828	-0.00182
252	Tsurumi Seiki Co.	Deep Blue	6.691	-0.00225

Data Record Layout

Subsurface temperature data

HEADER (Cruise Information)

FORMAT CODE
(blank) — 5
CRUISE NO
(blank) — 10
PERIOD Begin Month
Day — 15
End Month
Day
(blank) — 20
AREA — 25, 30, 35, 40, 45, 50, 55, 60

REC_IND
SHIP CODE — 125
(blank)
NO OF STN — 120
AREA (cont.) — 115, 110, 105, 100, 95, 90, 85, 80, 75, 70, 65

DATA (Station Information)

Field	Column
(blank)	
75m (750m)	60
(blank)	
50m (700m)	55
(blank)	
30m (650m)	50
(blank)	
20m (600m)	45
(blank)	
10m (550m)	40
(blank)	
0m (500m)	35
(blank)	
LONGITUDE — E/W, 1/10 Min., Min.	30
LONGITUDE — Deg.	
(blank)	25
LATITUDE — N/S, 1/10 Min., Min.	20
LATITUDE — Deg.	
(blank)	
DATE/TIME (JST) — Minute	15
DATE/TIME (JST) — Hour	
(blank)	
DATE/TIME (JST) — Day	10
DATE/TIME (JST) — Month	
(blank)	
STATION NO	5

Field	Column
REC_IND	
TYP	125
(blank)	120
(blank)	
ACM-NO	115
(blank)	110
SURF-SAL	105
(blank)	
450m (2000m)	100
(blank)	
400m (1800m)	95
(blank)	
350m (1600m)	90
(blank)	
300m (1400m)	85
(blank)	
250m (1200m)	80
(blank)	
200m (1000m)	75
(blank)	
150m (900m)	70
(blank)	
100m (800m)	65