

Volume 2 - Index

A

Air supply	
air purity standards	8-13
criteria	6-25
duration	7-14
emergency gas supply requirements	
for enclosed space diving	8-6
flow requirements	8-14
MK 20 MOD 0	8-6
emergency gas supply	8-6
flow requirements	8-6
MK 21 MOD 1	8-1
emergency gas supply	8-2
flow requirements	8-2
pressure requirements	8-2
preparation	8-23
pressure requirements	8-14
primary	8-15
procurement from commercial source	7-16
secondary	8-15
shipboard air systems	8-20
standby diver requirements	8-15
surface air supply requirements	8-13
water vapor control	8-15
Altitude diving	
air decompression	9-39
planning considerations	6-17
Ascent procedures	
decompression	7-39, 8-33
decompression dives	9-7
emergency free ascent	7-38
from under a vessel	7-39
surface-supplied diving	8-32
surfacing and leaving the water	7-40
variation in rate	9-8
Ascent rate	
air diving	9-7
delays	9-8
early arrival at first stop	9-11

B

Biological contamination	
as a planning consideration	6-17
Blasting plan	
minimum information	6-35
Blowout plugs	7-6
Bottom	
movement on the	8-26
searching on the	8-27
Bottom time	
as a planning consideration	6-1
definition	9-2

equivalent single dive	9-3
Bottom type	
as a planning consideration	6-13
Breathing hoses	
pre-dive inspection for scuba operations	7-22
Breathing technique	
scuba	7-30
Buddy diver	
buddy breathing procedure	7-35
ice/cold water diving	11-9
responsibilities	6-33, 7-32
Buddy line	
tending with	7-36
Buoyancy	
scuba	6-24
surface-supplied diving systems	6-25

C

Checklists	
Diving Safety and Planning Checklist	6-38
Emergency Assistance Checklist	6-48
Environmental Assessment Worksheet	6-9
Ship Repair Safety Checklist	6-34, 6-38
Surface-Supplied Diving Operations	
Pre-dive Checklist	6-38
Chemical contamination	
as a planning consideration	6-17
Civilian diving	
OSHA requirements	6-35
Clothing	
topside support personnel	11-6
CNS oxygen toxicity	
at the 40-fsw chamber stop	9-25
in nitrogen-oxygen diving	10-2
Cold water diving	
navigational considerations	11-1
planning guidelines	11-1
Combat swimming	
planning considerations	6-6
Command Smooth Diving Log	
abbreviations in	9-3
Communications	
diver intercommunication systems	8-20
hand signals	7-32
line-pull signals	7-32
surface-supplied operations	8-20
through-water systems	7-32
Compass	
pre-dive inspection for scuba operations	7-23
Compressors	
capacity requirements	8-16
filters	8-19
intercoolers	8-17

lubrication	8-17	scuba requirements	7-1
specifications	8-17	Depth limits	
maintaining	8-17	MK 20 MOD 0	8-5
pressure regulators	8-19	MK 21 MOD 1	8-1
reciprocating	8-16	open-circuit scuba	6-24, 6-52
selecting	8-16	surface-supplied air diving	6-24
Contaminated water		Descent procedures	
diving in	6-15	scuba	7-29
Convulsions		surface-supplied operations	8-25
at the 40-fsw chamber stop	9-25	Descent time	
Corners		definition	9-2
working around	8-28	Dive briefing	
Currents		assistance and emergencies	6-38
types of	6-14	debriefing the diving team	6-51
working in	6-15	establish mission objective	6-38
Cylinders		identify tasks and procedures	6-38
blowout plugs and safety discs	7-6	personnel assignments	6-38
charging methods	7-17	review diving procedures	6-38
charging with compressor	7-19	scuba operations	7-24
Department of Transportation specifications	7-4	Dive knife	
handling and storage	7-6	pre-dive inspection for scuba operations	7-23
high pressure	8-19	Dive site	
inspection requirements	7-6	selecting	11-7
manifold connectors	7-6	shelter	11-7, 11-8
operating procedures for charging	7-18	Diver protection	
pre-dive inspection for scuba operations	7-21	as a planning consideration	6-1
pressure gauge requirements	7-6	Diver tender	
sizes of approved	7-4	qualifications	6-33
topping off	7-19	responsibilities	6-33
valves and manifold assemblies	7-6	Diver training and qualification	6-34
		ice/cold water diving	11-7
		underwater construction	6-5
		underwater ship husbandry	6-3
		Diving craft and platforms	
		criteria for	6-26
		small craft requirements	6-26
		Diving Medical Officer	
		responsibilities	6-31
		Diving Officer	
		responsibilities	6-29
		Diving Safety and Planning Checklist	6-38
		Diving Supervisor	
		post-dive responsibilities	6-30
		pre-dive checklist	8-24
		pre-dive responsibilities	6-30
		qualifications	6-31
		responsibilities while underway	6-30
		Diving team	
		buddy diver	6-33
		Commanding Officer	6-29
		cross training and substitution	6-34
		diver tender	6-33
		Diving Medical Officer	6-31
		Diving Officer	6-29
		diving personnel	6-31
		Diving Supervisor	6-30
		explosive handlers	6-35
		ice/cold water diving	11-7
		manning levels	6-27

D

Decompression			
surface	9-22		
theory of	9-1		
Decompression schedule			
definition	9-2		
selecting	9-6		
Decompression stop			
definition	9-2		
Decompression table			
definition	9-2		
Decompression Tables			
Surface Decompression Table Using Oxygen	9-22		
Decompression tables			
Residual Nitrogen Timetable for Repetitive Air Dives	9-14		
Standard Air Decompression Table	9-12		
Surface Decompression Table Using Air	9-28		
Demolition missions			
planning considerations	6-6		
Depth			
as a planning consideration	6-13		
maximum	9-2		
stage	9-2		
Depth gauge			
pre-dive inspection for scuba operations	7-23		

Master Diver	6-29
medical personnel	6-33
personnel qualifications	6-31
physical requirements	6-34
recorder	6-33
selecting and assembling	6-27
standby diver	6-32
support personnel	6-34
underwater salvage demolition personnel	6-35
Diving technique	
factors when selecting	6-22
Donning gear	
scuba diving	7-24

E

Electrical shock hazards	
as a planning consideration	6-18
Emergency assistance	
as a planning consideration	6-1
checklist	6-48
Emergency gas supply	
MK 20 MOD 0 enclosed space diving	8-6
MK 21 MOD 1	8-2
Emergency operating procedures	
surface-supplied diving systems	8-15
Emergency procedures	
damage to helmet and diving dress	8-31
emergency assistance checklist	6-48
equipment failure	6-50
falling	8-31
fouled descent line	8-31
fouled umbilical lines	8-30
fouling and entrapment	6-48
free ascent	7-38
loss of communications	6-50
loss of gas supply	6-50
lost diver	6-50, 11-13
searching for	11-13
notification of ships personnel	6-48
Enclosed space diving	
hazards	8-27
MK 20 MOD 0 emergency gas supply	
requirements	8-6
planning considerations	6-6
safety precautions	8-28
Entry hole	
ice diving	11-8
Environmental Assessment Worksheet	6-9
Environmental conditions	
as a planning consideration	6-1
Environmental hazards	
biological contamination	6-17
chemical contamination	6-17
contaminated water	6-15
identifying	6-15
marine life	6-20
nuclear radiation	6-20

temperature	6-15
thermal pollution	6-17
underwater obstacles	6-17
underwater visibility	6-15
Equipment	
accessory for surface-supplied diving	8-12
air supply criteria	6-25
ancillary for ice/cold water diving	11-7
as a planning consideration	6-1
Authorized for Navy use	6-25, 7-2
demand regulator assembly	7-2
diving craft and platforms	6-26
for working in currents	6-15
full face mask	7-4
ice/cold water diving	11-4
mouthpiece	7-4
open-circuit scuba	7-2
optional for scuba operations	7-10
postdive procedures	7-41, 8-35
preparation for ice/cold water diving	11-9
required for scuba operations	7-1
selecting	6-25
Equivalent single dive bottom time	
definition	9-3
Exceptional exposure dives	9-34
Explosive ordnance disposal	
planning considerations	6-4
Extreme exposure suits	11-6

F

Face mask	
clearing	7-30
full	7-4
ice/cold water diving	11-4
pre-dive inspection for scuba operations	7-23

G

Gas mixtures	
continuous-flow mixing	10-9
nitrogen-oxygen diving	10-3, 10-9
Gauges	
pressure gauge requirements for scuba	7-6

H

Hand signals	
scuba	7-32
Harness	7-7
Harness straps and backpack	
pre-dive inspection for scuba operations	7-22
Hose	
clearing	7-30
Hot water suits	11-6
Humidity	
controlling in air supply	8-15
Hypothermia	11-13

L

Life preserver	
ice/cold water diving	11-3
pre-dive procedures	7-22
scuba training requirements	7-1
Lifelines	
ice/cold water diving	11-8
Line-pull signals	
scuba	7-32

M

Manifold connectors	7-6
Marine life	6-20
Master Diver	
qualifications	6-30
responsibilities	6-29
Maximum depth	
definition	9-2
Mission objective	
defining	6-2
establishing during dive briefing	6-38
MK 20 MOD 0	
air supply	8-6
depth limits	8-5
description	8-5
enclosed space diving	8-27
flow requirements	8-6
operation and maintenance	8-5
MK 21 MOD 1	
air supply	8-1
depth limits	8-1
description	8-1
emergency gas supply requirements	8-2
flow requirements	8-2
operation and maintenance	8-1
pressure requirements	8-2
Mouthpiece	7-4
clearing	7-30

N

Navigation lines	
ice/cold water diving	11-8
Nitrogen-oxygen diving	
advantages/disadvantages	10-1
breathing gas purity	10-9
CNS oxygen toxicity risks	10-2
equipment	10-7
fleet training	10-7
gas mixing techniques	10-9
gas systems	10-12
repetitive diving	10-5
selecting gas mixture	10-3
NOAA	6-17
No-Decompression Limit	
definition	9-3

Nuclear radiation	
as a planning consideration	6-20

O

Object recovery	
planning considerations	6-3, 6-7
Open-circuit scuba	
components	7-2
demand regulator assembly	7-2
depth limits	6-24, 6-52
Operating procedures	
charging scuba tanks	7-18
surface-supplied diving systems	8-15
Operational hazards	
identifying	6-8, 6-15
territorial waters	6-20
vessel and small boat traffic	6-20
Operational tasks	
identifying during dive briefing	6-38
job site procedures	8-29
planning and scheduling	6-36
underwater ship husbandry (UWSH)	8-29
OSHA requirements	
civilian diving	6-35
Oxygen system failure	9-23

P

Planning considerations	
bottom time	6-1
data sources	6-7
depth	6-13
diver protection	6-1
emergency assistance	6-1
environmental conditions	6-1
equipment	6-1
ice/cold water diving	11-1
identifying available resources	6-1
information gathering	6-7
natural factors	6-9
sea state	6-9
surface conditions	6-9
temperature	6-9
tides and currents	6-14
type of bottom	6-13
weather	6-1
Postdive procedures	
Diving Supervisor responsibilities	6-30
equipment	8-35
ice/cold water diving	11-12
personnel and reporting	8-34
scuba operations	7-40
tasks	6-37
Predescent surface check	
scuba	7-28
surface-supplied operations	8-24
Pre-dive inspection	

scuba operations	7-25
Prediving procedures	
air cylinder inspection	7-21
air supply preparation	8-23
breathing hose inspection	7-22
completing the prediving checklist	8-22
depth gauge and compass inspection	7-23
dive knife inspection	7-23
diver preparation and brief	7-24
diving station preparation	8-22
Diving Supervisor inspection	7-25
Diving Supervisor responsibilities	6-30
donning gear	7-24, 8-24, 11-11
equipment preparation	7-21
face mask inspection	7-23
harness straps and backpack inspection	7-22
inspection	8-24
life preserver/buoyancy compensator	
inspection	7-22
line preparation	8-23
miscellaneous equipment inspection	7-24
recompression chamber inspection and preparation	8-24
regulator inspection	7-22
snorkel inspection	7-23
submersible wrist watch inspection	7-23
Surface-Supplied Diving Operations Prediving Checklist	6-38
swim fins inspection	7-23
weight belt inspection	7-23
Purity standards	
air	8-13

R

Recompression chamber	
prediving inspection and preparation	8-24
Recorder	
responsibilities	6-33
Recording	9-3
Regulator	
cold water	11-3
demand	
assembly	7-2
prediving inspection for scuba operations	7-22
single hose	7-2
Repetitive dive	
definition	9-3
Repetitive dives	9-14
nitrogen-oxygen diving	10-5
Repetitive group designation	
definition	9-3
Reporting	
surface-supplied air operations	8-35
Residual nitrogen	
definition	9-3
Residual nitrogen time	
definition	9-3
exception rule	9-22

Residual nitrogen timetable for repetitive air dives	9-14
RNT Exception Rule	9-22

S

Safety discs	7-6
Salvage diving	
planning considerations	6-3
Scuba	
buoyancy	6-24
cold water diving	11-2
communication systems	7-32
environmental protection when using	6-24
mobility	6-24
open circuit	
depth limits	6-24
operational characteristics	6-24
operational limitations	6-24
portability of	6-24
swimming technique	7-31
Scuba diving	
optional equipment	7-10
prediving procedures	7-21
required equipment	7-1
Sea state	
planning considerations	6-9
Search missions	
planning considerations	6-3
Security swims	
planning considerations	6-4
Ship Repair Safety Checklist	6-38
Single dive	
definition	9-3
Single repetitive dive	
definition	9-3
Snorkel	
prediving inspection for scuba operations	7-23
Sonar	
safe diving distance	6-19
Stage depth	
definition	9-2
Standard Air Decompression Table	9-12
Standby diver	
air requirements	8-15
deploying as a working diver	6-32
ice/cold water diving	11-10
qualifications	6-32
Submersible wrist watch	
prediving inspection	7-23
scuba requirements	7-1
Suits	
hot water	11-6
ice/cold water diving	11-5
variable volume dry	11-6
Surface decompression	
transferring a diver to the chamber	8-34
Surface decompression table	
using air	9-28
using oxygen	9-22

Surface interval	
definition	9-3
Surface swimming	
scuba	7-29
Surface-supplied diving	
depth limits	6-24
Surface-Supplied Diving Operations	
Pre-dive Checklist	6-38
Surface-supplied diving systems	
buoyancy	6-25
effect of ice conditions on	11-5
environmental protection when using	6-25
ice/cold water diving	11-4
mobility	6-25
operational characteristics	6-25
operational limitations	6-25
Swim fins	
pre-dive inspection for scuba operations	7-23

T

Temperature	
as a planning consideration	6-9
wind chill factor	6-12
Tending	
ice/cold water diving	11-10
surface-supplied diver	8-31
with no surface line	7-37
with surface or buddy line	7-36
Territorial waters	
operating in	6-20
Thermal pollution	
as a planning consideration	6-17
Tides and currents	
as a planning consideration	6-14
Tools	
working with	7-37, 8-30

U

Underwater conditions	
adapting to	7-37, 8-26
Underwater construction	
diver training and qualification requirements	6-5
equipment requirements	6-5
planning considerations	6-5
planning resources	6-5
Underwater explosions	6-19
Underwater obstacles	
as a planning consideration	6-17
Underwater procedures	
adapting to conditions	7-37, 8-26
bottom checks	8-29
breathing technique	7-30

buddy diving	11-9
hose and mouthpiece clearing	7-30
mask clearing	7-30
movement on the bottom	8-26
searching on the bottom	8-27
tending the diver	11-10
working around corners	8-28
working inside a wreck	8-28
working near lines or moorings	8-29
Underwater ship husbandry	
diver training and qualification requirements	6-3
objective of	6-2
procedures	8-29
repair requirements	6-2
training program requirements	6-3
Unlimited/Decompression tables	
No-Decompression Limits and Repetitive	
Group Designation Table for	
Unlimited/No-Decompression	
Air Dives	9-11
Unlimited/No-Decompression Limits and	
Repetitive Group Designation Table	
for Unlimited/No-Decompression	
Air Dives	9-11

V

Variable volume dry suits	11-6
---------------------------	------

W

Water Entry	8-24
Water entry	
from the beach	7-28
rear roll method	7-28
step-in method	7-28
Weather	
as a planning consideration	6-1
Weight belt	
pre-dive inspection	7-23
Wet suits	11-5
Wind chill	
as a planning consideration	6-12
Worksheets	
Diving Safety and Planning Checklist	6-38
Emergency Assistance Checklist	6-48
Environmental Assessment Worksheet	6-9
Repetitive Dive Worksheet	9-14
Ship Repair Safety Checklist	6-34, 6-38
Surface-Supplied Diving Operations	
Pre-dive Checklist	6-38
Wrecks	
working inside	8-28