EXHIBIT 19

DOCKET A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.



DOCKET A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

On the cover: Photomicrograph of crystals of vitamin B₁. (Dennis Kunkel, University of Hawaii)

Included in this Dictionary are definitions which have been published previously in the following works: P. B. Jordain, Condensed Computer Encyclopedia, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. J. Markus, Electronics and Nucleonics Dictionary, 4th ed., Copyright © 1960, 1966, 1978 by McGraw-Hill, Inc. All rights reserved. J. Quick, Artists' and Illustrators' Encyclopedia, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. Blakiston's Gould Medical Dictionary, 3d ed., Copyright © 1956, 1972 by McGraw-Hill, Inc. All rights reserved. T. Baumeister and L. S. Marks, eds., Standard Handbook for Mechanical Engineers, 7th ed., Copyright © 1958, 1967 by McGraw-Hill, Inc. All rights reserved.

In addition, material has been drawn from the following references: R. E. Huschke, Glossary of Meteorology, American Meteorological Society, 1959; U.S. Air Force Glossary of Standardized Terms, AF Manual 11-1, vol. 1, 1972; Communications-Electronics Terminology, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., Dictionary of Technical Terms for Aerospace Use, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations, Royal Aircraft Establishment Technical Report 67158, 1967; Glossary of Air Traffic Control Terms, Federal Aviation Agency; A Glossary of Range Terminology, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; A DOD Glossary of Mapping, Charting and Geodetic Terms, 1st ed., Department of 1 Jense, 1967; P. W. Thrush, comp. and ed., A Dictionary of Mining, Mineral, and Related Terms, Bureau of Mines, 1968; Nuclear Terms: A Glossary, 2d ed., Atomic Energy Commission; F. Casey, ed., Compilation of Terms in Information Sciences Technology, Federal Council for Science and Technology, 1970; Glossary of Stinfo Terminology, Office of Aerospace Research, U.S. Air Force, 1963; Naval Dictionary of Electronic, Technical, and Imperative Terms, Bureau of Naval Personnel, 1962; ADP Glossary, Department of the Navy, NAVSO P-3097.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, **Fifth Edition**

Copyright © 1994, 1989, 1984, 1978, 1976, 1974 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

1234567890 DOW/DOW 99876543

ISBN 0-07-042333-4

Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of scientific and technical terms / Sybil P. Parker, editor in chief 5th ed.

p. cm. ISBN 0-07-042333-4 1. Science-Dictionaries. 2. Technology-Dictionaries. I. Parker, Sybil P. Q123.M34 1993 503---dc20 93-34772

CIP

INTERNATIONAL EDITION

DOCKE

Copyright @ 1994. Exclusive rights by McGraw-Hill, Inc. for manufacture and export. This book cannot be reexported from the country to which it is consigned by McGraw-Hill. The International Edition is not available in North America.

Find authenticated court documents without watermarks at docketalarm.com.

Case 5:20-cv-09341-EJD Document 138-22 Filed 03/18/22 Page 4 of 6

band-rejection filter

r

ve

٦d

d

u~

ly

re

de

e-

if

۶đ

0

d

g.

lg

in

n

18

at

'n

nt

n

ā.

0

ıg

d

of

ly

w

٦ť

n

1]

a

Ċ,

g

S

band-rejection filter See band-stop filter. ('band ri'jek-shən _fil-tər)

band saw [MECH ENG] A power-operated woodworking saw consisting basically of a flexible band of steel having teeth on one edge, running over two vertical pulleys, and operated under tension. { 'band, so }

band scheme [SOLID STATE] The identification of energy bands of a solid with the levels of independent atoms from which they arise as the atoms are brought together to form the solid, together with the width and spacing of the bands. { 'band ,skëm }

band selector [ELECTR] A switch that selects any of the bands in which a receiver, signal generator, or transmitter is designed to operate and usually has two or more sections to make the required changes in all tuning circuits simultaneously. Also known as band switch. { 'band sə'lek tər }

B and S gage See American wire gage. { bē ən [ēs gāj]

band spectrum [SPECT] A spectrum consisting of groups or bands of closely spaced lines in emission or absorption, characteristic of molecular gases and chemical compounds. Also known as band. { 'band ,spek-trəm }

band spreading [COMMUN] Method of double-sideband transmission in which the frequency band of the modulating wave is shifted upward in frequency so that the sidebands produced by modulation are separated in frequency from the carrier by an amount at least equal to the bandwidth of the original modulating wave, and second order distortion products may be filtered from the demodulator output. ['band ,spred'ij }

band-spread tuning control [ELECTR] A tuning control provided on some shortwave receivers to spread the stations in a single band of frequencies over an entire tuning dial. { 'band spred 'tün in kən'trol }

band-stop filter [ELECTR] An electric filter which transmits more or less uniformly at all frequencies of interest except for a band within which frequency components are largely attenuated. Also known as band-elimination filter; band-rejection filter. { 'band, stap, fil+tor }

band switch See band selector. { 'band ,swich }

band theory of ferromagnetism [SOLID STATE] A theory according to which ferromagnetism is caused by electrons in the unfilled energy bands of a crystal. { 'band ,the əre əv ,fer o'mag nə,tiz əm }

band theory of solids [SOLID STATE] A quantum-mechanical theory of the motion of electrons in solids that predicts certain restricted ranges or bands for the energies of these electrons. Also known as energy-band theory of solids. { 'band ,thē·ə·rē əv 'säl·ədz }

band wheel [MECHENG] In a drilling operation, a large wheel that transmits power from the engine to the walking beam. (band, wel}

bandwidth [COMMUN] The difference between the frequency limits of a band containing the useful frequency components of a signal. Abbreviated BW. { 'band, width }

bandwidth reduction See bit-rate reduction. { 'band, width

bandylite [MINERAL] CuB_2O_4 ·CuCl₂·4H₂O A tetragonal mineral that is deep blue with greenish lights and consists of a hydrated copper borate-chloride. { 'ban·də,līt }

Bangalore torpedo [ORD] A metal tube or pipe packed with a high-explosive charge; chiefly used to clear a path through barbed wire or minefields. { 'baŋ gə,lor tor'pēd ō }

bang-bang circuit [ELECTR] An operational amplifier with double feedback limiters that drive a high-speed relay (1-2 milliseconds) in an analog computer; involved in signal-controlled programming. { ban sər kət }

tolled programming. { 'baŋ 'baŋ 'sərkət } baŋg-bang control [COMPUT SCI] Control of programming In an analog computer through a bang-bang circuit. [CONT SYS] A Upe of automatic control system in which the applied control signals assume either their maximum or minimum values. ['baŋ 'baŋ kən'tröl }

bang-bang-off control See bang-zero-bang control. { ;ban [ban] of kən,tröl }

bang-bang robot [CONT SYS] A simple robot that can make Only two types of motions. { ',baŋ ',baŋ 'rō,bät }

Banglophyceae [BOT] A class of red algae in the plant di-Vision Rhodophyta. {,baŋē ə'fīsē,ē}

Bang's disease See contagious abortion. { 'banz diz'ēz } bang-zero-bang control [cont sys] A type of control in Which the control values on at their maximum of control in mum. Also known as bang-bang-off control. { 'baŋ ,zir-ö 'baŋ kən,tröl }

banister [BUILD] A handrail for a staircase. { 'ban ə stər } bank [AERO ENG] The lateral inward inclination of an airplane when it rounds a curve. [CIV ENG] See embankment. [ELEC] 1. A number of similar electrical devices, such as resistors, connected together for use as a single device. 2. An assemblage of fixed contacts over which one or more wipers or brushes move in order to establish electrical connections in automatic switching. [ENG] A pipework installation in which the pipes are set parallel to each other in proximity. [GEOL] 1. The edge of a waterway. 2. The rising ground bordering a body of water. 3. A steep slope or face, generally consisting of unconsolidated material. [IND ENG] The amount of material allowed to accumulate at a point on a production line where it is not employed or worked upon, to permit reasonable fluctuations in line speed before and after the point. Also known as float. [MIN ENG] 1. The top of the shaft. 2. The surface around the mouth of a shaft. 3. The whole, or sometimes only one side or one end, of a working place underground. 4. To manipulate materials such as coal, gravel, or sand on a bank. 5. A terracelike bench in open-pit mining. [OCEANOGR] A relatively flat-topped raised portion of the sea floor occurring at shallow depth and charac-

teristically on the continental shelf or near an island. { bank } bank-and-turnindicator [AERO ENG] A device used to advise the pilot that the aircraft is turning at a certain rate, and that the wings are properly banked to preclude slipping or sliding of the aircraft as it continues in flight. Also known as bank indicator. { 'bank an 'təm 'in-də,kād-ər }

bank-and-wiper switch [ELEC] Switch in which electromagnetic ratchets or other mechanisms are used, first, to move the wipers to a desired group of terminals, and second, to move the wipers over the terminals of the group to the desired bank contacts. { 'baŋk ən 'wīrpər ,swich }

bank cushion [NAV] In nautical navigation, a force acting on the bow of a ship in a manner which forces the ship away from the bank in a restricted channel, especially where the banks are steep; it is a force which opposes bank suction. { 'bank ,kushon }

bank deposit [GEOL] Mounds, ridges, and terraces of sediment rising above and about the surrounding sea bottom. { 'bank di 'päz ət }

banked winding [ELECTR], A radio-frequency coil winding which proceeds from one end of the coil to the other without return by having, side by side, many flat spirals formed by winding single turns one over the other, thereby reducing the distributed capacitance of the coil. { 'baŋkt 'wind iŋ }

banker [ENG] The bench or table upon which bricklayers and stonemasons prepare and shape their material. { 'baŋ kər } **banket** [GEOL] A conglomerate containing valuable metal to

be exploited. { ban ket } bankfull stage [HYD] The flow stage of a river in which the

stream completely fills its channel and the elevation of the water surface coincides with the bank margins. { 'bank 'full stäj }

bank gravel See bank-run gravel { 'bank, grav-a} } **bank height** [MIN ENG] The vertical height of a bank as measured between its highest point or crest and its toe at the digging level or bench. Also known as bench height; digging height. { 'bank, hīt }

bank indicator See bank-and-turn-indicator. { 'bank 'ində,kād-ər }

banking pin [HOROL] One of the erect pins in the bottom plate of a watch that restrict the movement of the lever. { 'bank-ing .pin }

bank-inset reef [GEOL] A coral reef situated on island or continental shelves well inside the outer edges. { 'baŋk 'in,set ,rēf }

bank material [CIV ENG] Soil or rock in place before excavation or blasting. { 'bank mə'tirē·əl }

bank measure [CIV ENG] The volume of a given portion of soil or rock as measured in its original position before excavation. { 'baŋk ,mezh ər }

bank reef [GEOL] A reef which rises at a distance back from the outer margin of rimless shoals. { 'bank, ref }

bank-run gravel [GEOL] A natural deposit comprising gravel or sand. [MATER] Aggregate taken directly from natural deposits; contains both large and small stones. Also known as bank gravel; run-of-bank gravel. { 'baŋk ,rən 'grav-əl }



BAND SAW

187

bank sand

The narrow band saw, a flexible band of steel, can make curved as well as straight cuts even in thick pieces. (*Delta*)





band-stop

Transmission function of a bandstop filter. Frequency (ω) components are largely attenuated at the stop band.

2

oscillation 1414

DOCKE.

Δ

RM

a singularity, undergoes another big bang to begin a new cycle, and thenceforth oscillates between successive expansions and contractions, each contraction followed by a new big bang. { 'as-ə,lād-iŋ 'yü-nə,vərs }

oscillation [CONT SYS] See cycling. [MATH] 1. The oscillation of a real-valued function on an interval is the difference between its least upper bound and greatest lower bound there. **2.** The oscillation of a real-valued function at a point x is the limit of the oscillation of the function on the interval [x - e, x + e]as e approaches 0. Also known as saltus. [PHYS] Any effect that varies periodically back and forth between two values. { as·ə'lā·shən }

oscillation photography [SOLID STATE] A method of x-ray diffraction analysis in which a single crystal is made to oscillate through a small angle about an axis perpendicular to a beam of monochromatic x-rays or particles. (¡äs ə¦lā shən fə¦täg rə fë }

oscillation ripple See oscillation ripple mark. (,äs ə'lā shən rip•əl

oscillation ripple mark [GEOL] A symmetric ripple mark having a sharp, narrow, and relatively straight crest between broadly rounded troughs, formed by the motion of water agitated by oscillatory waves on a sandy base at a depth shallower than wave base. Also known as oscillation ripple; oscillatory ripple mark; wave ripple mark. { ,äs·ə'lā·shən 'rip·əl ,märk }

oscillator [ELECTR] 1. An electronic circuit that converts energy from a direct-current source to a periodically varying electric output. 2. The stage of a superheterodyne receiver that generates a radio-frequency signal of the correct frequency to mix with the incoming signal and produce the intermediatefrequency value of the receiver. 3. The stage of a transmitter that generates the carrier frequency of the station or some fraction of the carrier frequency. [PHYS] Any device (mechanical or electrical) which, in the absence of external forces, can have a periodic back-and-forth motion, the frequency determined by the properties of the oscillator. { 'as-a, lad-ar }

oscillator harmonic interference [ELECTR] Interference occurring in a superheterodyne receiver due to the interaction of incoming signals with harmonics (usually the second harmonic) of the local oscillator. { 'äs ə, lād ər här'män ik ,in tər'fir əns } Oscillatoriales [BOT] An order of blue-green algae (Cyano-

phyceae) which are filamentous and truly multicellular. { asə·lə,tor·ē'ā·lēz }

oscillator-mixer-first detector See converter. { 'as a lad ar 'mik·sər ,fərst di'tek•tər }

oscillator strength [ATOM PHYS] A quantum-mechanical analog of the number of dispersion electrons having a given natural frequency in an atom, used in an equation for the absorption coefficient of a spectral line; it need not be a whole number. Also known as f value; Ladenburg f value. { 'äs ə, lād ər strenkth }

oscillatory circuit [ELEC] Circuit containing inductance or capacitance, or both, and resistance, connected so that a voltage impulse will produce an output current which periodically reverses or oscillates. { 'as ə lə tor ē 'sər kət }

oscillatory discharge [ELEC] Alternating current of gradually decreasing amplitude which, under certain conditions, flows through a circuit containing inductance, capacitance, and resistance when a voltage is applied. { 'äs ə lə, tor ē 'dis, chärj }

oscillatory extinction See undulatory extinction. { 'as o lo, torē ik stiņk shən)

oscillatory reaction [CHEM] A chemical reaction in which a variable of a chemical system exhibits regular periodic changes in time or in space. { 'äs-ə-lə,tor-ē rē'ak-shən }

oscillatory ripple mark See oscillation ripple mark. { 'äs•ə• lə tor ē 'rip əl märk }

oscillatory shear [FL MECH] Application of small-amplitude oscillations to produce shear in viscoelastic fluids for the study of dynamic viscosity. { 'äs ə·lə,tor ē 'shir }

oscillatory surge [ELEC] Surge which includes both positive and negative polarity values. { 'äs ə lə, tor ē 'sərj

oscillatory twinning [CRYSTAL] Repeated, parallel twinning. { 'äs·ə·lə,tór·ē 'twin·iŋ }

oscillatory wave [PHYS] A wave composed of individual particles, each of which oscillates about a point with little, if any, permanent change in position. { 'äs ə la, tór ē 'wāv } oscillistor [ELECTR] A bar of semiconductor material, such

it is placed in a magnetic field and is carrying direct current that flows parallel to the magnetic field. { as a listar } oscillogram [ENG] The permanent record produced by an

osmium tetroxide

oscillograph, or a photograph of the trace produced by an oscillograph. loscope. { ə'sil·ə,gram } oscillograph [ENG] A measurement device for determining

waveform by recording the instantaneous values of a quantity such as voltage as a function of time. { ə'sil ə, graf } oscillographic polarography [PHYS CHEM] A type of vol.

tammetry using a dropping mercury electrode with oscillographic scanning of the applied potential; used to measure the concentration of electroactive species in solutions. ['as-plə¦graf·ik pō·lə'räg·rə·fē }

oscillograph tube [ELECTR] Cathode-ray tube used to produce a visible pattern, which is the graphical representation of electric signals, by variations of the position of the focused spot or spots according to these signals. { ə'sil-ə,graf, tüb } OScillometric titration [PHYS CHEM] Radio-frequency tech-

nique used for conductometric and dielectrometric titrations, the changes in conductance or dielectric properties changes the solution capacity and thus the frequency of the connected oscillator circuit. { ¦äs·ə·lō¦me·trik tī'trā·shən }

oscillometry [PHYS CHEM] Electrode measurement of oscil. lation-frequency changes to detect the progress of a titration of electrolytic solutions. { as ə'läm ə trē }

oscilloscope See cathode-ray oscilloscope. { a'sil-a,skop } Oscillospiraceae [MICROBIO] Formerly a family of large, gram-negative, motile bacteria of the order Caryophanales which lose motility on exposure to oxygen. { as alo sparfas ē,ē }

oscine See scopoline. { 'ä,sīn }

Oscines [VERT ZOO] The songbirds, a suborder of the order Passeriformes. { 'äs ə, nēz }

O scope [ELECTR] An A scope modified by the inclusion of an adjustable notch for measuring range. Also known as () indicator; O scan. { 'ō sköp }

osculating circle [MATH] For a plane curve C at a point p, the limiting circle obtained by taking the circle that is tangent to C at p and passes through a variable point q on C, and then letting q approach p. { 'äs kya, lād iŋ 'sər kəl }

osculating orbit [ASTRON] The orbit which would be followed by a body such as an asteroid or comet if, at a given time. all the planets suddenly disappeared, and it then moved under the gravitational force of the sun alone. ['as kya, lading 'or bət

osculating plane [MATH] For a curve C at some point p, this is the limiting plane obtained from taking planes through the tangent to C at \hat{p} and containing some variable point p' and then letting p' approach p along C. { 'äs kyə, lād iŋ 'plān } osculating sphere [MATH] For a curve C at a point p, the

limiting sphere obtained by taking the sphere that passes through p and three other points on C and then letting these three points approach p independently along C. { 'as kyə, lād iŋ 'sfir

osculum [INV ZOO] An excurrent orifice in Porifera. ['25' kyə·ləm]

Oseen's flow [FL MECH] Fluid flow in which the velocity of flow is very small but the Reynolds number is greater than 1. (ü'sānz .flō

Osgood-Schlatter disease See osteochondrosis. ['äz,güd 'shlad ər di zēz)

O shell [ATOM PHYS] The fifth layer of electrons about the nucleus of an atom, having electrons characterized by the prin-

cipal quantum number 5. { 'o shel } Osler-Rendu-Weber disease See hereditary hemorrhagic tel-

angiectasia. ('os·lər 'rän·dü 'web·ər di,zez) osmate [INORG CHEM] A salt or ester of osmic acid, containing the osmate radical, OSO_4^{2-} ; for example, potassium osmate

osmic acid anhydride [INORG CHEM] OsO, Poisonous yellow crystals with disagreeable odor; melis at 40°C; soluble in water, alcohol, and ether; used in medicine, photography, and catalysis. Also known as osmium oxide; osmium tetroxide.

osmium [CHEM] A chemical element, symbol Os, atomic number 76, atomic weight 190.2. [MET] A hard white metal

osmium oxide See osmic acid anhydride. ('äz mē am 'äk,sīd i of rare natural occurrence. { 'az·mē·əm } osmium tetroxide See osmic acid anhydride. { 'azmē:em osm

osmola iondis _{si} the s _{os}mola nondise s the s _{os}mole arity o of an i concert anit of an OSIT dissoci olute _{ុទ}ពាលព ular W vent m j äz 'm osmop with h osmop mə fõ 0\$M0f hypoth the blo antidiu osmor mecha of osn mő'rej osmos semip solute the so osmot 10 IVS i äz'n osmot pat 1 osmot unired offers allow the pu passa tions the sc Also osmo adilu 0/S/O 0sos wind ('õ,s osphr os pri ossei disso l'äsossec l'äs-0ssec l'äs-0sse(óssic midd äs ossif **QSSif** Össif Ostec

ossip

laini

dial]

9st-, (

25

0 sta bot i

DOCKET



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

