

Directions to the Club Meeting Location

Where: South St. Paul Municipal Airport, a.k.a. Fleming Field, located on the southern extremity of South St. Paul, south of I-494, west of Concord Street and East of Highway 52.

If coming from the western Twin Cities going east on 494:

- Exit at the 7th and 5th Avenue exit (Exit No.65)
- Turn right (South) on 7th Ave and go approximately .6 miles to a 4-way Stop sign. This is South Street W. To your left there will be a McDonald's; to your right front there will be a Walgreen's.
- Turn left (East) at the 4-way Stop onto
- South Street W and go approximately .6 miles. Along the way you will encounter three more Stop signs—the third Stop sign (Henry Avenue) will be a "T" intersection. At the "T" intersection on your left will be homes and on your right softball fields.
- Turn right (south) onto Henry Ave. and go approximately .2

miles toward the Fleming Field airport terminal building.
if coming from east Twin Cities on westbound 494:

- Exit at the 7th and 5th Avenue exit (Exit No.65)
- Turn left (South) on 7th Ave and go approximately .6 miles to a 4-way Stop sign. This is South Street W. To your left front there will be a small strip mall; to your right there will be an Amoco station.
- Turn left (East) at the 4-way Stop onto
- South Street W and go approximately .4 miles. Along the way you will encounter two more Stop signs—the third Stop sign (Henry Avenue) will be a "T" intersection. At the "T" intersection on your left will be homes and on your right softball fields.
- Turn right (south) onto Henry Ave. and go approximately .2 miles toward the Fleming Field airport terminal building.

The terminal is on the right with parking available.

Twin City Aero Historian
Rick Schmierer
1852 E. 39 Street
Minneapolis, MN 55407

Return address requested

The Aero Historian is published monthly by the Twin City Aero Historians, Inc., a joint chapter of the American Aviation Historical Society and International Plastic Modelers Society/USA, for members and readers as part of their annual dues or fees.

The group is open to aviation enthusiasts from teenagers on up who are interested in aviation modeling, photography, collecting, art and writing. For more information contact Ken Hornby at 651-552-0888

The Twin Cities Aero Historians (TCAH) meet the second Saturday of every month at 1:30pm.

See above for the new meeting locations and directions.

Mail Newsletter material and address changes to the treasurer.

ROLL MODELS
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John Roll
Vice President
John@rollmodels.com

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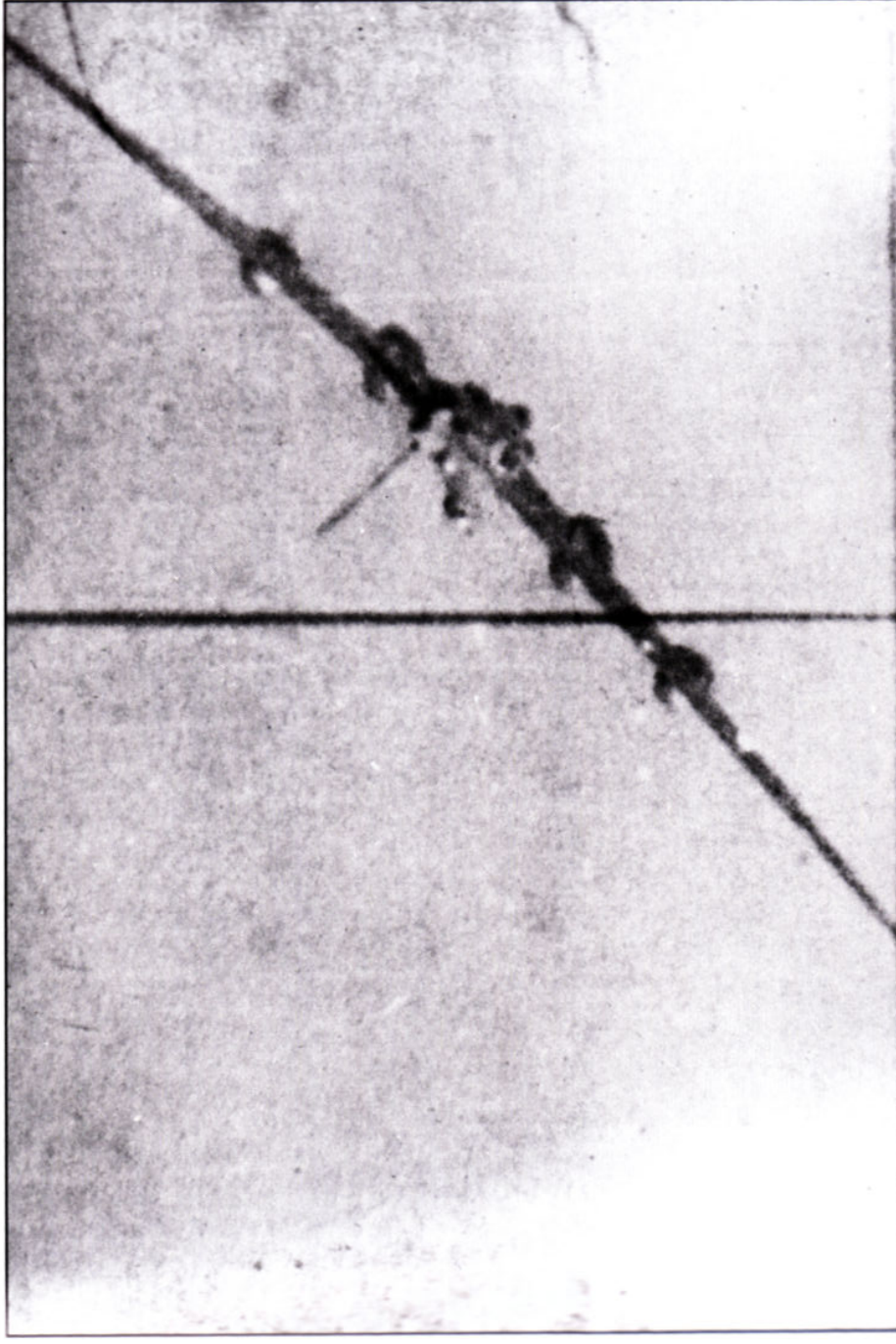
DRAW DECALS

The Aero Historian

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June 2008



MiG-15 Gun Camera Photo of a B-29

23 October 1951

Book Review Soviet MiG-15 Aces of the Korean War by Bob Arko

The latest in the Osprey Aircraft of the Aces series, when I saw the gun camera photo of the B-29 I knew I had to use it in the newsletter. So, is that B-29 trying some desperate air combat maneuvering, or is the fighter in a bank during this pass? I can't get a horizontal reference out of those background clouds. What do you think?

This is bit of history that I don't know a lot about, and I found the

book to be fascinating. I knew there were some Soviet pilots "advising" the North Koreans, but I didn't realize that 52 of them became aces in that war! They are all listed, with detailed descriptions of many of the encounters. The book is organized into chapters covering roughly half-year periods in the war, and describes the introduction of a variety of US and allied aircraft from the MiG-15 pilot's perspective. There are 36 color profiles, and the artwork is superb.

The following is the description of the book released by Osprey in their announcement of its publica-

tion:

The Soviet Union began assisting the People's Republic of China in its establishment of a modern air force in 1950, when Soviet Air Force regiments were sent to train local pilots. China's involvement in the Korean War in late October 1950 inevitably drew Soviet pilots into the war, with a total of 52 Soviet pilots scoring five or more victory actions. The history of these covert actions has been a long-buried secret and this book is the first English publication to detail the only instance when the Cold War became

(Continued on page 3)

TCAH Officers

President, Bob Maderich
Vice-President, Larry Donovan
Secretary, Bernie Kugel
Treasurer, Steve Jantscher
Historian, Tom Norrbohm

Newsletter Info

Article Submission Deadline: 22nd of each month.

Editor

Bob Arko
6417 Rice Court
Lino Lakes, MN 55014
651-481-8887h
763-496-6742w
bob@loumc.com

Distribution Editor
Rick Schmierer
1852 E. 39 Street
Minneapolis, MN 55407
612-721-8787
rschmierer@mn.rr.com.

Send articles to:

Bob Arko
6417 Rice Court
Lino Lakes, MN 55014
bob@loumc.com

Send Change of address notice to:
 Steve Jantscher
 20430 Texas Avenue
 Prior Lake, Minnesota 55372

TCAH This Month

The monthly meeting will be held Saturday June 14, at Fleming Field, South St. Paul, beginning at 1:30 pm. Vendor baiting will begin about 12:30, so come early.

Picture your model here! Send me a photo of your model, and it'll be used to fill these little white spaces at the ends of the columns.

GENERAL MEETING MINUTES – May 2008

Bob Maderich called the meeting at 1:30pm. Steve Jantscher gave the Treasurer's Report. Greg D., Axel K., Winston V., and John R. all gave their vendors reports. Sean B. gave us an update on the website, and Larry D. and Bernie K. gave the club updates on upcoming contest and NordicCon. Frank Cuden was chosen "Member of the Year". Merrill Anderson reminded everyone of the "Ground Pounders" contest for next



From the Vice President by Larry Donovan

Yep, still looking for just the right name for this monthly museum...something will stick eventually (much like my superglued fingers on my Airfix Bristol Bulldog a week or two back!).

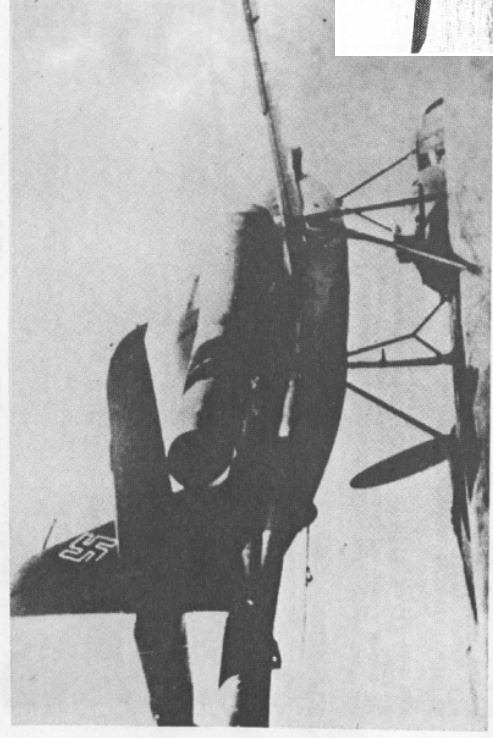
With the onset of summer the contest and show season slows down so we can enjoy the healthful benefits of fresh air, abundant sunshine, and huge mosquito bites. I think a good time was had by all who attended the Omacon/Region 5 show held last week (May 16-17) at the Mid-West Center in Council Bluffs. IPMS Ft. Crook, organizers of the show, did a great job in putting together the contest. They had a great raffle, though I may be prejudiced here as I won eight kits and three decal sheets (I ended up giving three of the kits to the "Kits for the Troops" box the club had erected---it was rather full by the end of the show); the registration was very smooth; and the judging was very well organized. Three of the "major" show vendors were present: our own Winston Vermilyea/WingsnTreads; CMR Hobbies; and Sprue Brothers. CMR will not be able to venture north for Nordicon this year as Chris has a previous commitment (a family wedding). Despite the high cost of gas this year there was a good turnout from the Missouri, Kansas, and

Iowa clubs. Our (as in Twin City Aero Historians) representation, besides myself were Winston, Steve Husted, and Ken Sallman. Additionally the usual suspects from the Rochester IPMS club made their appearance.

The one thing about the show was that I would have had a difficult time being a judge...a lot of good modeling going on here. As I wrote in a previous email on the Yahoo group message I did not have "notebook in hand" to take notes of winning entries, so please go easy if I missed mentioning an award or two. I also omitted to tell of the "double victory" in the Vermilyea family: Vermilyea pere et filles won awards!

Winston took home two plaques to his daughter for her work on her first two kits....and Winston himself won for his own work including the new Hasegawa Saab J-35 Draaken, amongst others. And as I said in the Yahoo message, Steve Husted won a number of awards---hopefully he did not make Ken carry them all out to the car at once. Several of the Rochester club members also were awarded for their craft, so all in all a good two days for Minnesotans at Omacon.

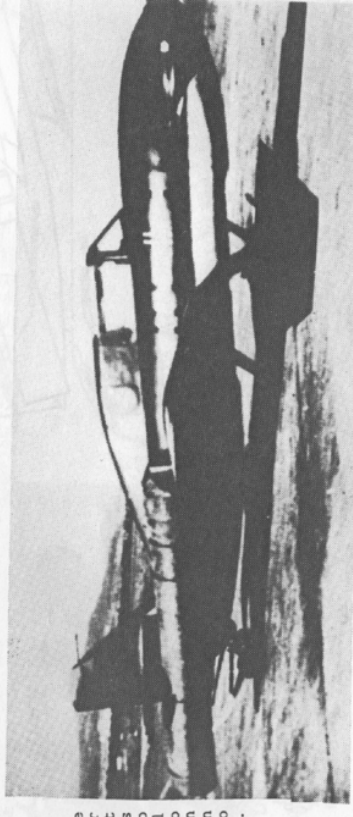
So don't let them summer drums pass you by...get that dehumidifier cranked up to overload, go ahead put two moisture traps in that line, and go slather on that MEK to keep the bugs away! Start building now for Nordicon (only 4 months away) and the rest of the fall shows. See you at the June meeting!



Side view of the Me328B with two pulse jets mounted on the rear fuselage just ahead of the wings trailing edge. This installation led to the loss of two airtightness. It appears in the photo the forward control-combustion section is wrapped in canvas held on with two retaining straps similar to the way the German RATO bottles were. (Ref. 2).



Rear view of the Me328 with two pulse jets mounted on the rear fuselage atop the Do217z. Note the mounting structure for you conversionists. Note the size of the rear mounted pulse jets in these two views. They are much larger than the under wing units. (Ref. 2)



ON THE TABLE May 2008

Name	Model	Manufacturer	Scale
Bernie Kugel	3/ F-18 Hornets	Hasegawa	1/72
""	Polikarpov Po-2	Gavia	1/48
""	Nieuport 16	Eduard	1/48
""	Hanriot HD.1	Eduard	1/48
Don Stauffer	SMS Emden	Revell	1/350
Frank Cuden	Cessna O2-A	Testors	1/48
""	B-57B	Italeri	1/72
""	T-28	Monogram	1/48
Mark Jacques	Batmobile	Hot Wheels	1/24
Winston Vermilyea	F.156 Storch	Tamiya	1/48
""	Y-wing	Fine Molds	1/72
""	Panzer III	Tamiya	1/48
""	Zero A6M	Fine Molds	1/72
Bob Maderich	Dewotone 501	Heller	1/72
""	EuroCopter	Revell	1/72
""	Junkers D.1	Roden	1/72
Steve Erickson	MiG-3	Trumpeter	1/48
Sean Bizowoski	King Tiger	Tamiya	1/48
""	Panther	Tamiya	1/48

(Continued from page 5)

Messerschmitt an Aircraft Album, J. Richard Smith, 1971, Arcolan Allen.

Second in a series of company histories that included Heinkel, Junkers, Boeing, and Hawker. Each produced type gets photo, text and spec coverage. Me328 gets three pages (7x9), four photos.

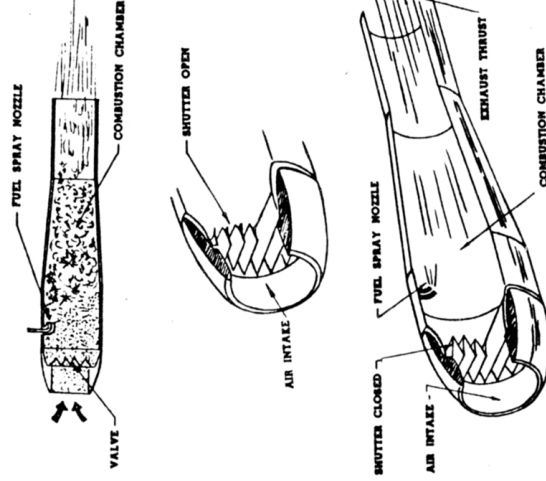
Messerschmitt Me328B, Luftfahrt, 1942, reprinted by Karl Pawlas, 1956.

Reprint of a 1942 program booklet on the Me328. 48 pages (6x8) in German. Includes performance charts, a line and a shadow 3-view, two assembly breakdowns and two artists impressions. Wish I could read it.

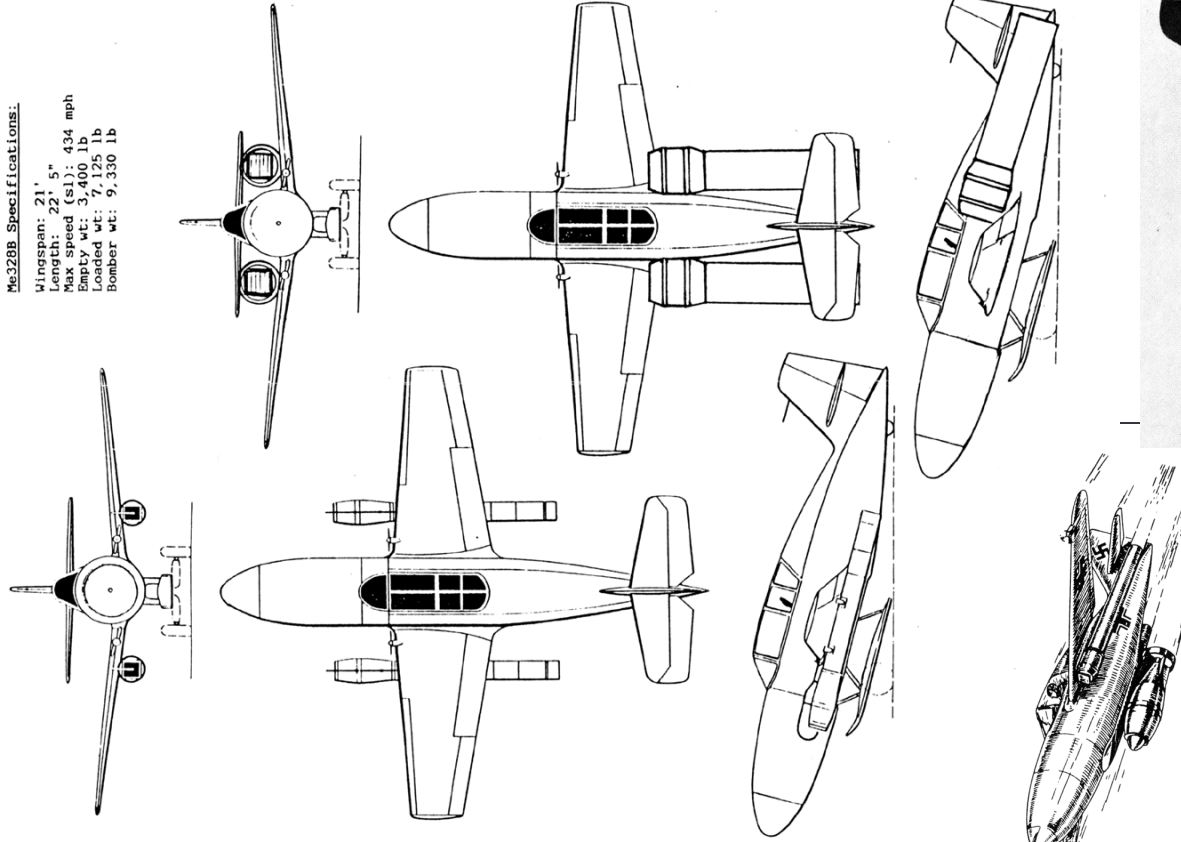
Warplanes of the Third Reich, William Green, 1972, Doubleday.

The bible of German aircraft of WWII in general. 672 pages (9x11) cover all German aircraft to fly during WWII. Me328 gets three pages of history, four photos, specs and 3-views.

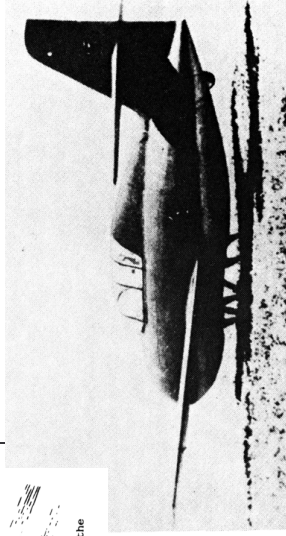
Since most references are out of print I have tried to incorporate as much material as I could. The Green book cannot be recommended enough.



Me328B Specifications:
Wingspan: 21'
Length: 22' 5"
Max speed (stl): 434 mph
Empty wt: 3,400 lb
Loaded wt: 7,125 lb
Bomb wt: 9,330 lb



Bomb laden Me328 from a 1942 German booklet on the type (Ref. 3).



The first Me328 VI shown on its extended skid as if it just landed (Ref. 2).



The first Me328 VI in a three point position utilizing the two wheeled dolly which mounted under the extended skid (Ref. 2).



Airline Chatter by Terry Love

Jet Blue lost \$8 million in the first quarter of 2008.

Air Tran lost \$34.8 million in the first quarter of 2008.

United Airlines lost \$537 million in the first quarter of 2008.

Delta Airlines lost \$6.4 Billion in the first quarter of 2008.

Northwest Airlines lost \$4 Billion in the first quarter of 2008.

U S Airways lost \$236 million in the first quarter of 2008.

Alaska Airlines lost \$89 million in the first quarter of 2008.

SAS lost \$163 million in the first quarter of 2008.

China Eastern Airlines lost \$58 million in the first quarter of 2008.

Not that they care, since all of the airlines in China are owned by the Chinese Government.

The main reason for these huge losses is high jet fuel costs. Jet A is running about \$3.50 per gallon. A Boeing 747 (Northwest Airlines has 31 747s in their fleet) holds 55,000 gallons of jet fuel. To fill one up, costs 55,000 x 3.50 or \$192,500. Now, a 747 holds about 400 people. Thus it cost 192,500 divided by 400 or \$481.25 per passenger. AND THAT IS JUST FOR FUEL!!! That does not include any other costs - personnel, administration, taxes, fees, etc.

Bangladesh Airlines ordered 4 Boeing 777-300ERs, 4 Boeing 787 Dreamliners, and 2 Boeing 737-800s. Deal is worth \$1.38 Billion.

Bombardier delivered the 1500th CRJ to Mesaba Airlines in March. Bombardier had firm orders for 1663 more CRJs from more than 50 customers in 20 countries.

American Airlines has had an early merger talks with Continental Airlines.

Continental Airlines has called off merger talks with United Airlines due to the weak financial condition of United Airlines. Too big of a mess. But Continental would consider an alliance.

EOS Airlines, which operated between New York City and London, has filed for bankruptcy due to high fuel costs and a soft economy.

Singapore Airlines has taken delivery of their fourth Airbus A-380 super jumbo jet.

United Airlines and U S Airways are in advanced merger talks. U S management team would control, and the headquarters would be in Chicago. The name United would survive.

Tunis Air ordered 16 Airbus A-320s.

Boeing announced that it received an order for 30 Boeing 737-800s from the government of Iraq for Iraqi Air. Deal is worth about \$2 Billion.

Asiana, the South Korean airline, ordered two Boeing 777-300ERs, valued at \$438 million. Asiana presently has 9 Boeing 777s. This makes 360 Boeing 777s on order with Boeing. Boeing has sold 1,070 Boeing 777s.

The Chinese Government announced that the name of the Chinese Aircraft manufacturer to compete with Boeing and Airbus, is called Commercial Aircraft Corporation of China, Ltd. (CACCC). The first focus will be on the Douglas DC-9 clone that flew for the first time in March. It is called the ARJ-21, dubbed the Xiangfeng or "Flying Phoenix." They have been secretly working on a large jumbo jet for years, also.

NordicCon 2008 pt 1 by Bernie Kugel

For all those who know. The TCAH is putting on NordicCon this September. You can find info on the website. I am heading it up this year, and am calling on members of this club and other clubs to help pitch in. Now most of the hard stuff has been taken care of, but what I'm looking for are people to help us with the day of the contest. I need people to help with registration, set-up and tear-down, and security. If you want to help, please let me know. I can really use the help.

Thank you

(Continued from page 1)
"hot". This book uncovers Soviet combat experiences during the Korean War from detailed unit histories and rare first-hand accounts. With access to extensive Russian archives, the authors offer an enthralling insight into an air war that has been largely covered up and neglected. Illustrated with previously unpublished photographs and detailed full color profiles, this book is a unique opportunity to read about an often-forgotten aspect of the Cold War.

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A perfect companion title for the hugely popular Aircraft of the Aces 4, which tells the Korean War story from the USAF perspective.

This is the 82nd title in Osprey's "Aircraft of the Aces" series, which provides comprehensive histories of the elite fighter

(Continued on page 4)

(Continued from page 3)

pilots and their aircraft.

Leonid Krylov and Yuriy Tep-surkaev have been researching the covert Soviet Air Force participation in the air war over North Korea for almost 20 years, and they have published several articles and books on the subject in Russia.

Their research, started in 1989, is based on Soviet documents stored at the Central Archive of the Russian Defense Ministry and recollections of veterans of the 64th IAK.

During 17 years of research, the authors have accumulated recollections from over 100 participants in the Korean War, and studied several thousand archive documents ranging from debriefing and combat reports to documents drawn up by the Air Force Commander-in-Chief and the Air Force General Staff.

Yuriy Tepsurkaev is a Russian aviation illustrator with many years of research experience into the Soviet involvement in the Korean War.



The cover art is by Mark Pothethwaite, a well respected British aviation artist.



The Messerschmitt Me 328B-1 by Rick Koehn

At the end of WWII, German advanced aircraft projects in the air and on the drawing boards ranged from small one man interceptors to a giant two stage trans-Atlantic stratospheric bomber. Most on paper went through numerous modifications and powerplant changes, few were actually built in one model let alone several.

The exception to this was Messerschmitt's Me328 which was flown as a glider, and then with several different types and numbers of ramjet engines. The key to the aircraft was the development of the small inexpensive and expendable pulsejet engine being built by Argus. Unlike the larger Sanger units which Messerschmitt planned to install on their Me262 (12 Squared Lorin conversion kit #2-12), the Argus units could be used singularly or in clusters.

In July, 1941, Messerschmitt began design work on a small expendable pulsejet powered aircraft as Projekt 1079. In collaboration with DFS the project finalized as the P. 1079/17, which the RLM labeled Me328 in 1942. The aircraft was envisioned as an expendable cheap singlesortie escort fighter which would be towed into battle by a He177 at the end of a Deichsel-schlepp, or towing pole. Six versions were proposed: Me328A-1 fighter with 2-20mm cannons, two Argus pulsejets of 661 lbs thrust and a 21' wingspan; Me328A-2 fighter with 2-20mm and 2-30mm cannons, four 661 lb Argus units and a 27' wingspan; Me328A-3 fighter similar to the A-2 with inflight refueling; Me328B-1 fighter bomber version of the A-1 with the capability of carrying a 2,205 lb bomb; Me328B-2 fighter bomber version of the A-2 with the capability of carrying a 2,205 lb bomb; and the Me328B-3 similar to the B-2 but which could carry a 3,086 lb SD 1400 bomb.

(Continued from page 4)

jettisoned and on two occasions the aircraft were lost when the rear fuselage failed. Other methods of launch included the installation of a two wheel dolly fitted to the skid which was jettisonable on takeoff similar to the Me163's, after rocket boosters thrust the aircraft airborne, the Madelung KL 12 catapult or a Rheinmetall-Borsig rocket-propelled rail trolley.

It appears at this time that the pulse jet units were moved to under the wings, but eventually the entire pulse jet project was abandoned before the final seven aircraft were finished. But even more numerous versions had been in the planning including a U-boat launched model, a high-speed tactical reconnaissance model with four engines and the Me328C which was to add a Jumo 004B jet engine in the aft fuselage to supplement the pulse jets.

After the incompatibility of the airframe and engines was accepted, it was proposed to utilize the Me328 as a pinpoint manned bomb to be used by KG200. Carried to the target Mistel style, the pilot would jettison the rear fuselage and bail out prior to impact.

Me328 Construction:

The Me328 was to be of all wood construction with four 110 Imp. gal fuel tanks in the fuselage, two in front of and two aft of the cockpit. The cockpit was protected by a 15mm armour bulkhead ahead of the cockpit, a second 15mm plate directly ahead of the pilot and an 80mm armoured glass windshield. The canopy hinged to the right for access. The controls were normal and the instrumentation basic. A semi-retractable skid was carried in the belly and shock was absorbed by a oleo strut from a FW200 which fitted to a roller that ran in a track in the belly. Later on the rear of the skid was cut out to accommodate a bomb. When the bomb was installed the skid was retracted. Hence the skid carried the bomb but the load was carried

by the airframe.

The wooden wings were fitted with camber changing flaps which could be deflected through 50° and had cut outs for the wing mounted pulse jets when extended. A balloon cable cutter ran along the entire leading edge and slots were fitted outboard of the engines. The lower surfaces by the engines were protected by asbestos plates. Each engine had a fuel pump that was driven by an accumulator until the wind driven generators on each wing took effect.

Me328 Pulse Jets:

All references only make mention of one powerplant, the Argus As 014 pulse jet rated at approximately 660 lbs thrust at sea level. The photos of the aft mounted pulse jets (Ref. 2) appear to be nearly twice the diameter of the wing mounted units. Since the output of a pulse jet is determined by the diameter of the pipe and the amount of the fuel dumped into it, that the initial tests of the tail mounted units were of nearly 1,000 lb thrust. Mention is made that development of an 880 lb thrust unit was anticipated. Hence I have provided parts to model the tail units with the large diameter pulse jets.

The pulse jet is one of two types of ramjets. The other is the athodyd, or technically called a "continuous thermal duct" or flying stovepipe. In the athodyd there is a continuous flow of fuel and air to form a continuous combustion. Both types of ramjets must have forward movement prior to ignition to maintain combustion which is why V-1's were rail launched with rockets and the Me328 was to be air launched, or use rocket dollies or catapults.

The pulse jet or pulsejet (depends on reference) is referred to as a "resonant jet", "intermittent-firing duct powerplant", and as an "aeroresonator". Basically it is a long tube with a unit in the front which houses several basic components

such as combustion chamber, fuel nozzles and a flapper or shutter valve. The aircraft's forward movement rams air into the combustion chamber. When fuel is injected and then detonated the resulting pressure in the chamber forces the shutters in front to close, which in turn creates a jet effect in the exhaust nozzle. With the force of the explosion escaping out the exhaust the corresponding reduction of pressure in the front reopens the shutter to allow in more air and the cycle repeats itself. The shutter is the only moving part in the engine and driven strictly by the varying pressures within the combustion chamber. A ring of fuel nozzles or injectors mount directed behind the shutters and a spark plug or perhaps several mounted further to the rear, provide the ignition.

The high thrust pressures then are developed from the series of explosions at rapid fixed intervals which then establish the wave frequency of the engine. In order to obtain the greatest efficiency, the explosions of the fuel-air mixture must be in resonance with the compression-wave frequency of the whole system. This is where the resonant jet name comes from. The pulsejet used in the V-1 which was also an Argus 014 had a frequency of 2,800 cycles per minute.

This explains why the V-1 was primarily built of steel and of the stress problems associated with the large tail mounted pulse jets on the Me328.

Me328 References:

German Jet Genesis, David Masters, 1982, Janes.

A fascinating book covering 197 project titles of WWII German jet and rocket aircraft. Most only get a paragraph and line sketch. Operational types (Me262) several pages (8 1/2 x 11). Me328 gets one column of text, one of specs and two line drawings.

(Continued on page 6)