

THE VISUAL EFFECTS
OF

ALIEN

Jon Sorensen

Personal recollections and
impressions of working on Alien

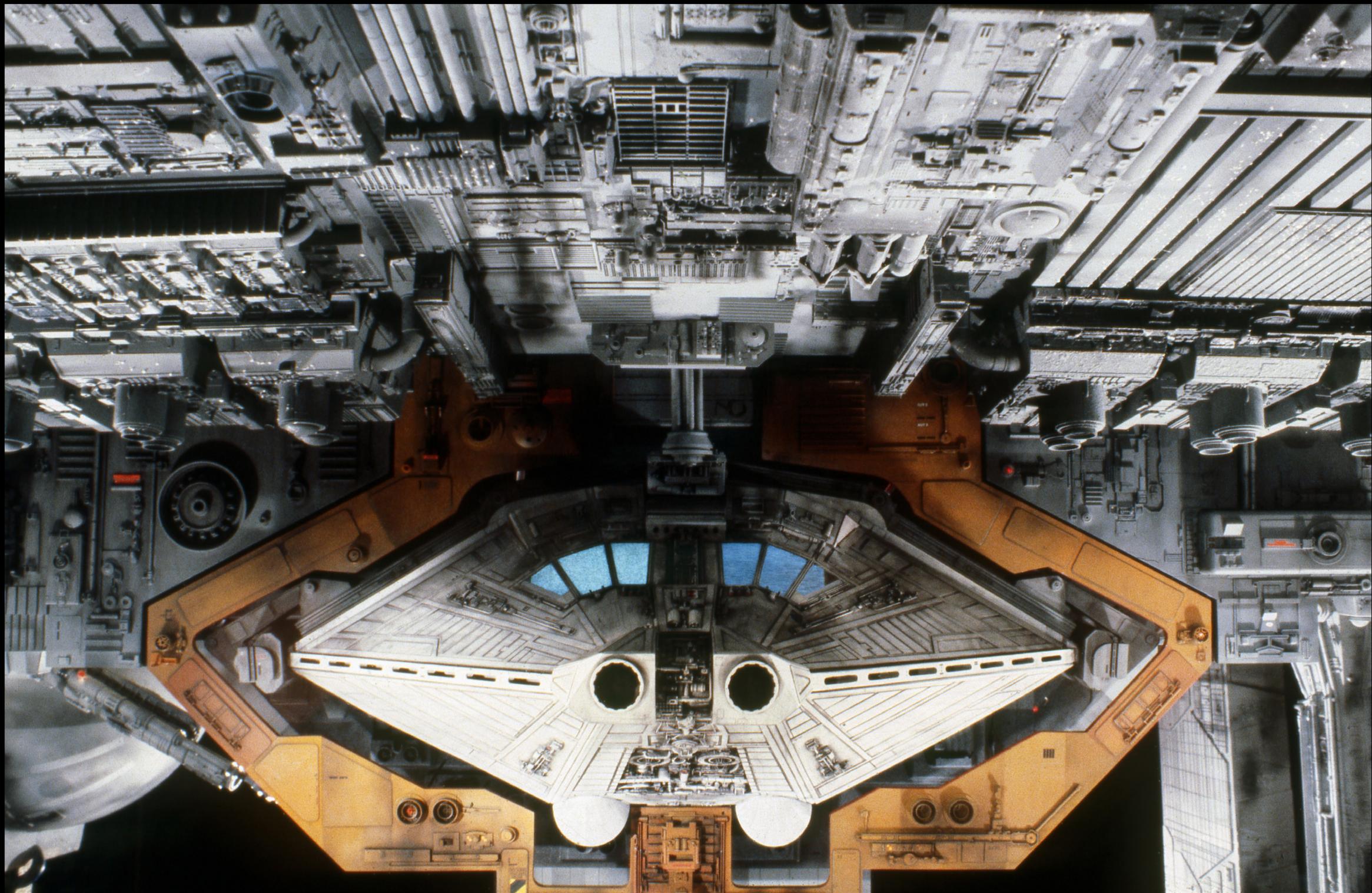
1978. From the four corners of the United Kingdom a miniatures visual effects crew was assembled at Bray Film Studios to work on a then low budget script called ALIEN. Many of us were either new or relatively new to the film industry. Maybe that was the secret. We were allowed to spread our wings by two wonderful bosses, Brian Johnson and Nick Alder. The old hands tolerated our young enthusiasms and patiently taught and nurtured us. I myself arrived from Scotland full of Celtic mysticism, Ray Harryhausen movies, a love of Poe and HP Lovecraft, and wide-eyed with young possibilities. The budget grew when 20th Century Fox saw what they were getting for their money, both at Shepperton Studios and Bray. For the new generation who will come along after us, and for the one after them, I am passing on my personal recollections and impressions of working on this seminal film. Even our director was learning his craft and encouraged experimentation from all of us. It was a time like no other. The title page of the ALIEN script carried the Conrad quote, "We live as we Dream. Alone". I hope the new individuals who might come along, and are keen to practice these handmade crafts, will see through that. You can dream and live together. Ray Harryhausen also told me. "Sometimes you have to reach for the Stars. You might just get halfway there". I hope some of this inspires you to reach and dream, for in making ALIEN in 1978-79, we too were standing on the shoulders of giants.

JON SORENSEN

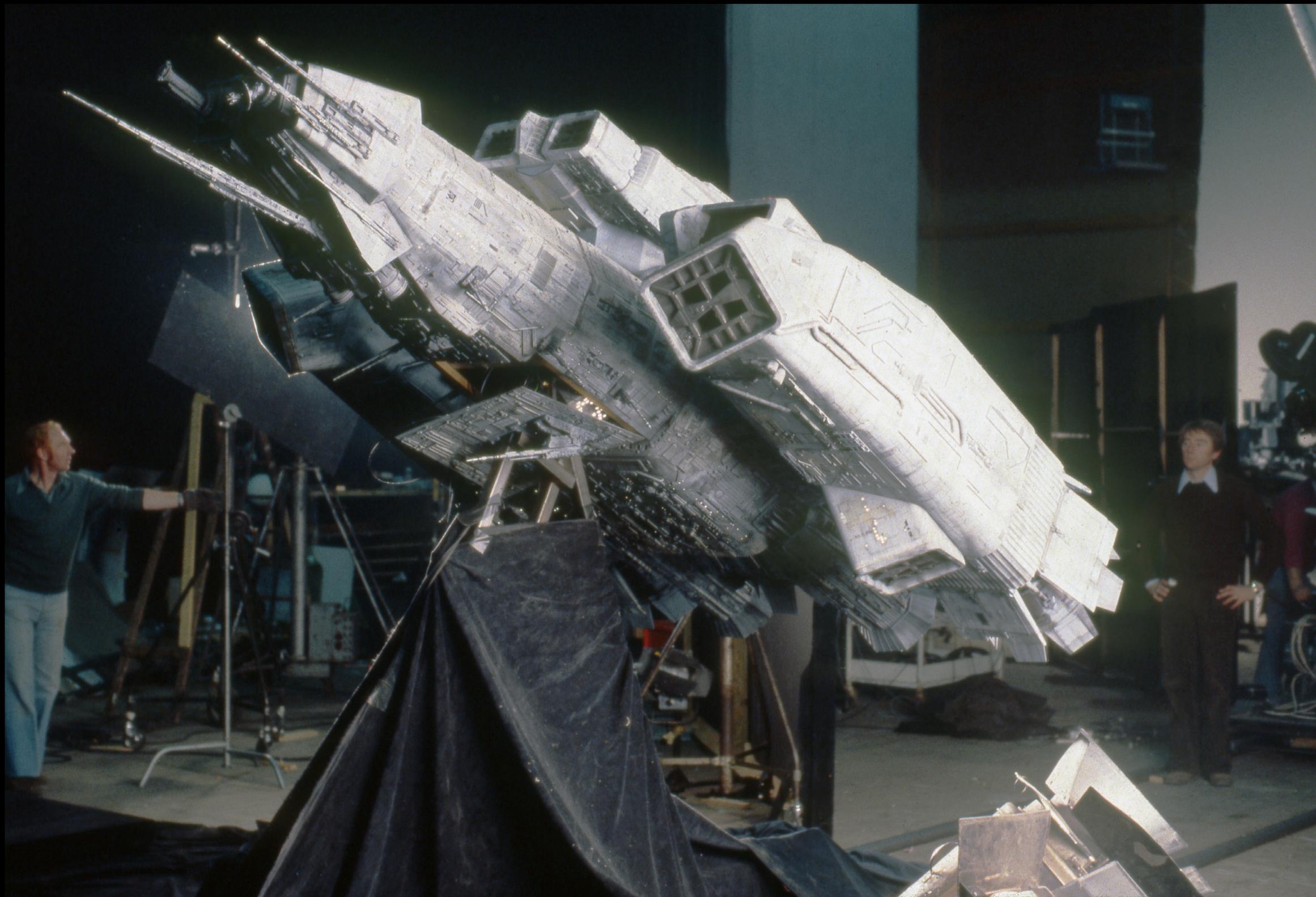




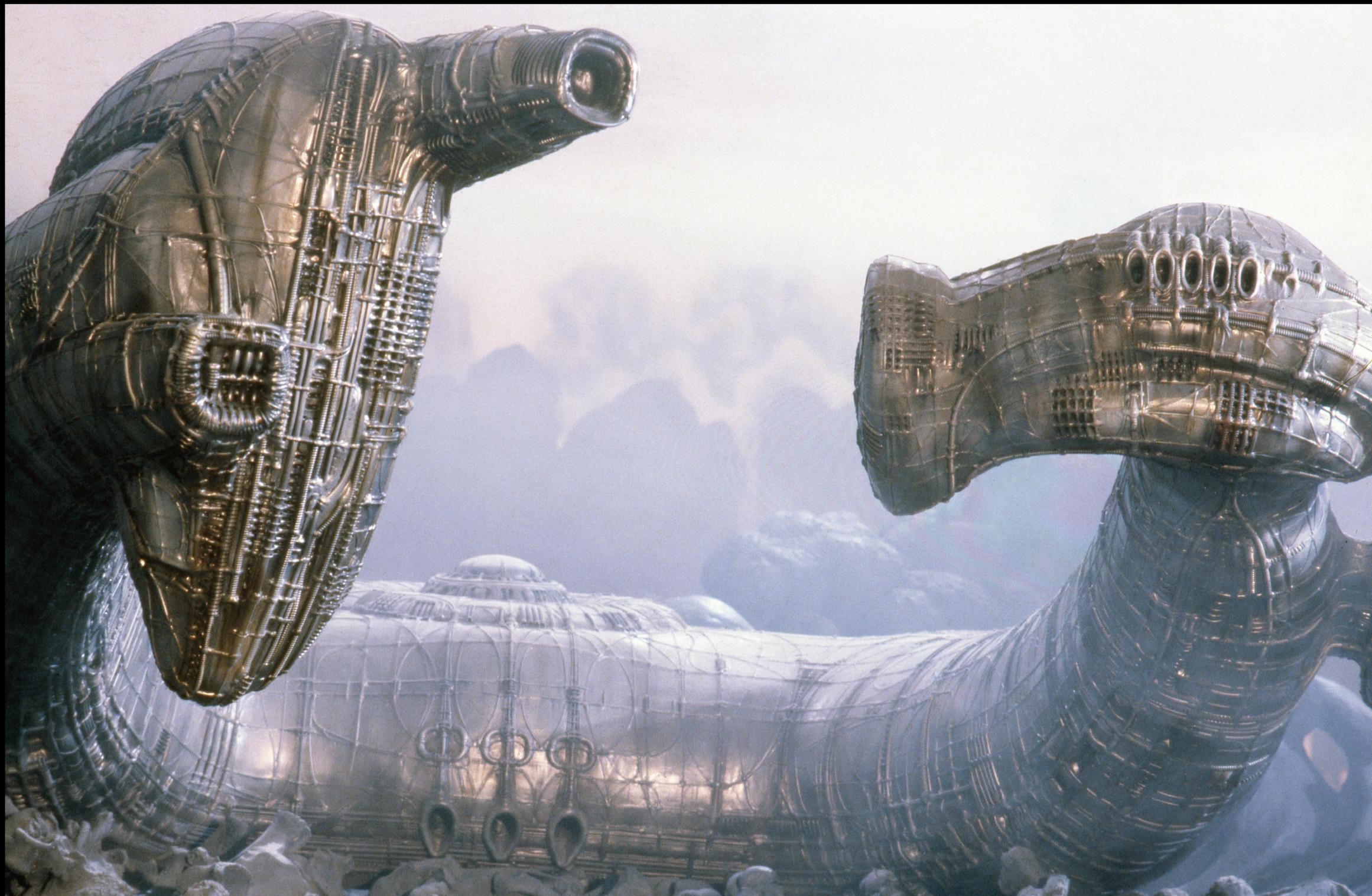
This is the miniature under construction representing the underside of the Nostromo tug and the Narcissus shuttle docking bay for use in the film's climax when Ripley escapes in the shuttle and sets the Refinery to self-destruct thinking the Alien is still aboard the main Weylan Yutani structure, (in the sequel ALIENS the Refinery was given a cash value by the company of \$42 million "in adjusted dollars"). This "miniature corridor" ran for around 100 feet in length. The basic detail on the "hull" was made up of repeatable vacu-formed panels simply stapled in series to a wooden skeletal frame. I recall this being constructed in a very short time. Subsidiary detail to break up the shot was simply a matter of improvisation plus using anything salvageable in the way of pieces from other miniatures. This was near the end of the model shoot so there was plenty laying around. In foreground, with glasses, is Denys Ayling, the model unit DP. Standing to his right and behind him is special effects technician Neil Swan. Camera tracks were laid along this corridor to track under it in what we jokingly referred to as the "Star Wars" shot, harking back to the opening of that film. A tremendous amount of light was needed and the exposures were very tricky for Denys and required much flagging for flares, since the camera was tracking. Various versions of the shot were done at various speeds and one was selected by the Director, later to be matted into the Narcissus observation window amongst other things.



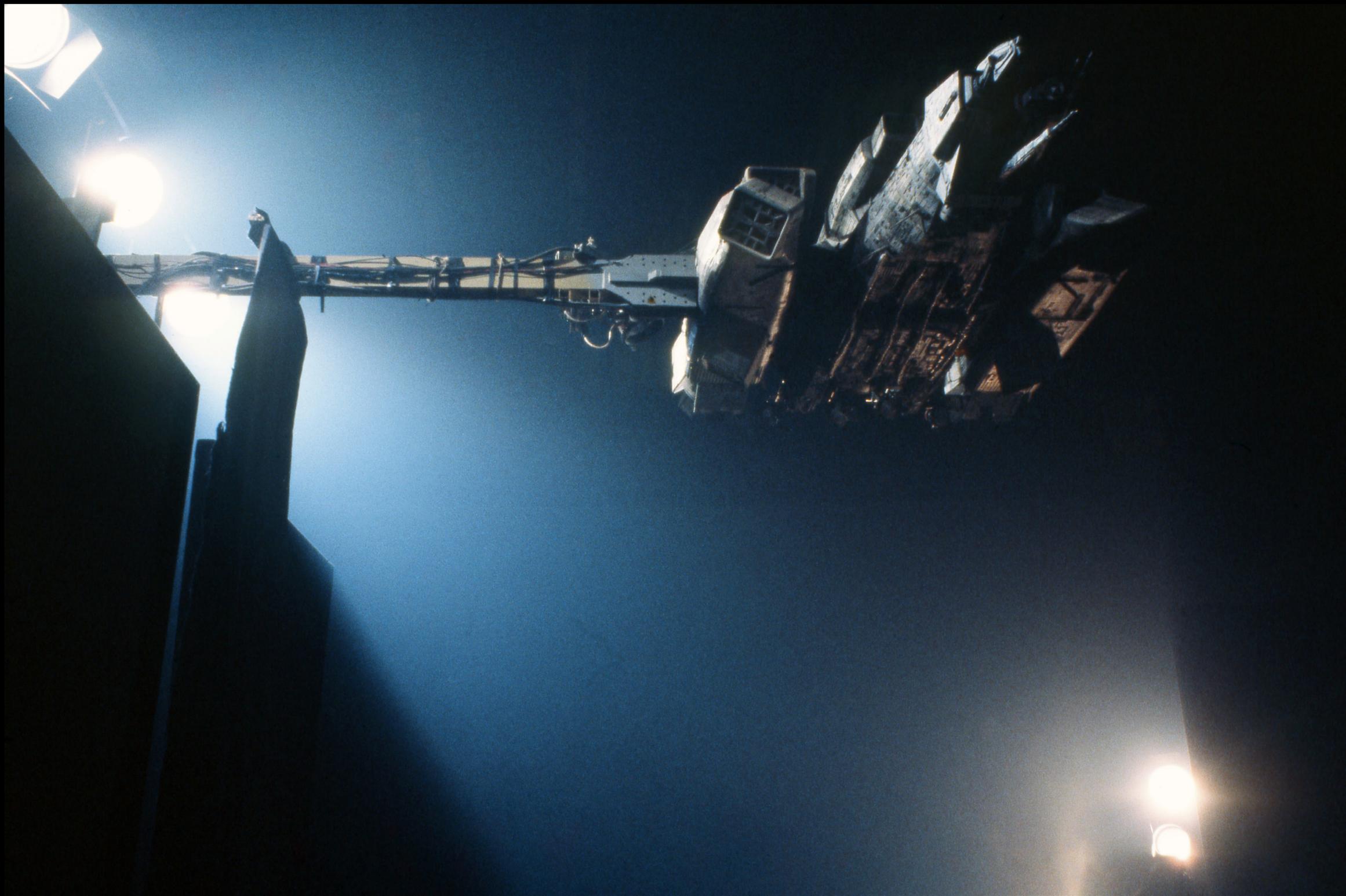
This was the larger scale version of one of the most popular miniatures with fans of the film, the Narcissus escape shuttle, in which Ripley jetisons herself with Jones the cat at the climax of the film. An elaborate model, the shuttle herself was around 1 metre across. The detail on her was laboriously applied to suggest matching the main "hero" Narciccus miniature also seen in the movie. As was the surrounding detail. The reason for the size of this version was to incorporate two television monitors inside her windows. These were Sony and of the smallest size available at that time, and had to be taken out of their cosmetic housing in order to fit the two Trinitron colour tubes into each window. Traditionally, this kind of shot would have been accomplished with rear film projection. As was done with other sequences in ALIEN. 16mm film was shot of stand-ins moving around in extemporised sets to suggest the interior of the Narcissus. Tests had actually been done with this using myself and Neil Swan as guineau pigs moving around an earlier, abandoned version of the Refinery "engine room" miniature to see if this idea would work. Colour balance in the monitors became paramount in order to sit well with the surrounding miniature. As did avoiding the rolling bar effect on the screens when being reshot on film. The latter was solved by a variable speed motor on our camera, a Mitchell S35. Video was supervised by Dick Hewitt who later performed similar functions on OUTLAND. Exposures were very tricky. We shot on "anamorphic" which also made focus splits and depth of field very difficult for the Focus Puller, Terry Pearce. Prime lenses were used whenever possible as opposed to a zoom lens.



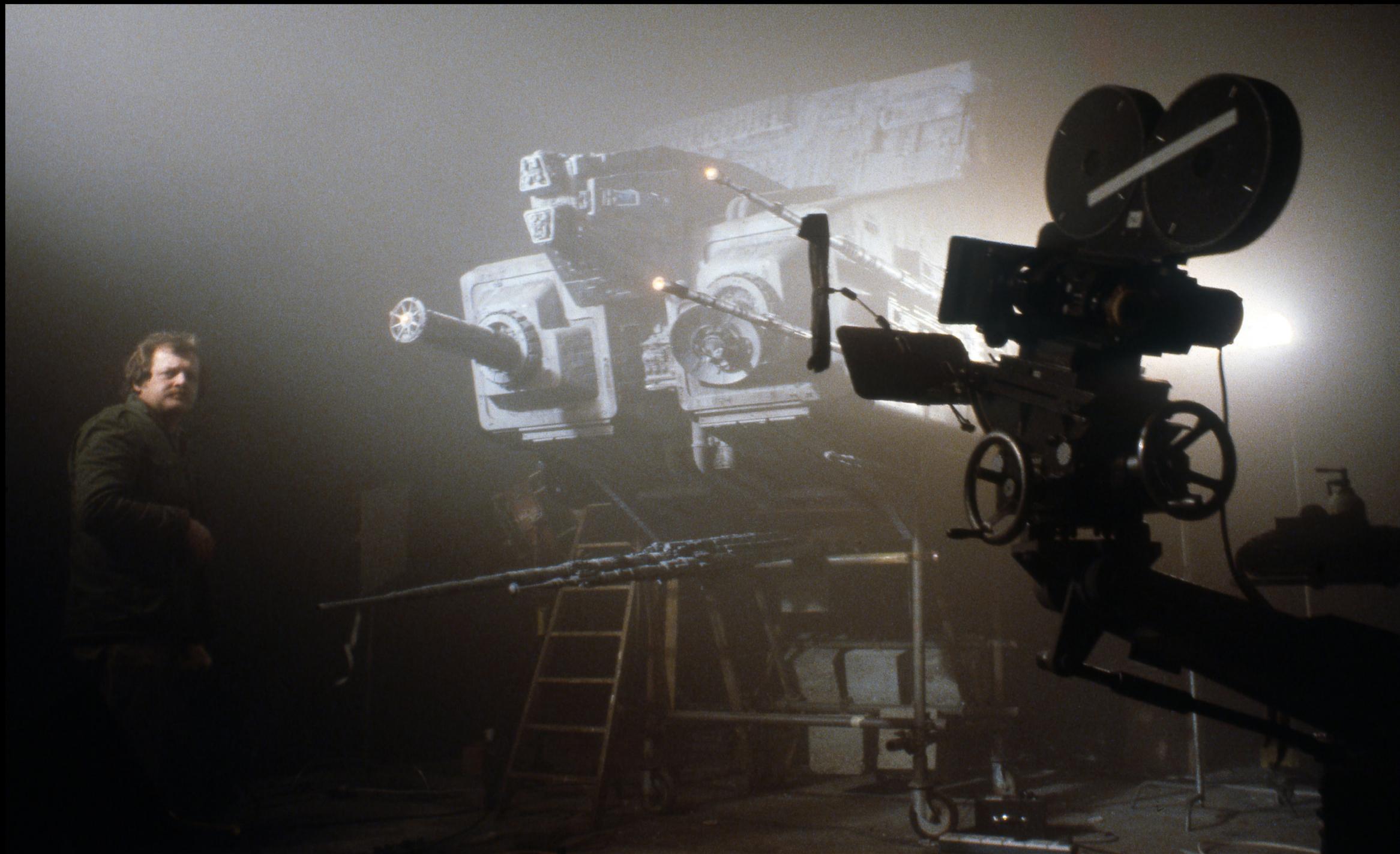
A shot of the main "hero" miniature of a model which over the years has become as much of an icon for ALIEN as the Alien itself, the Nostromo. Here she is seen being prepared for an overhead shot to be composited in-camera of the vessel arriving in orbit around the alien planet in preparation to descend and land. The size and weight of this model required her to be moved with a fork-lift truck, which made any adjustments of angle quite tricky. Her main skeleton was woodworked by Ron Hone and Brian Eke in the Bray miniatures workshop. Plasticard cladding was then meticulously added on top. This served as the basis on which to apply the very complicated detail on her hull. Some sections were cast in glass fibre such as the tricky angles on the engine nacelles. Interior lighting was added by way of many many feet of fibre optics. This ship went through many permutations. This shot shows her in her final form. She looks almost tired after many many weeks of shooting. There were originally 33 storyboarded visual effects shots for the miniatures sequences. This varied as the shoot progressed. Lighting a miniature of this size took a lot of power, including then commonly used carbon-arc "brutes", in order to carry the depth of field. We all got very attached to her.



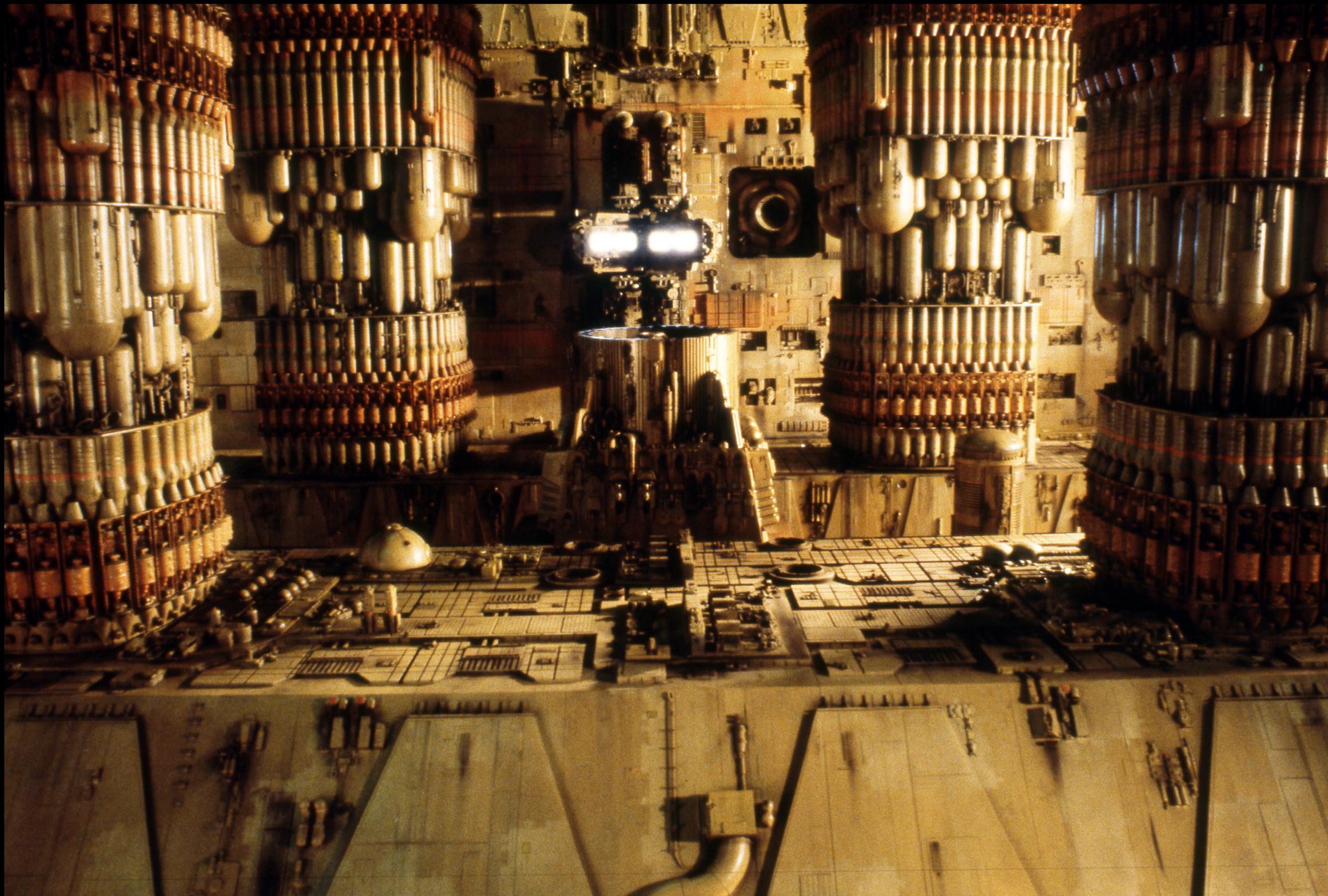
A shot of another iconic miniature from ALIEN. The "Derelict" spacecraft found by the crew of the Nostromo. Of course this was where all their problems started in the film. Designed by HR Giger as only he can design. Nothing like it had ever been seen on the cinema screen before this. Giger, of course, designed all the alien elements, including the Alien itself. He was a real find and basically came to the attention of Ridley Scott through one of the writers of the screenplay, Dan O'Bannon. Dan had worked alongside Giger in France on the aborted version of Jodorowsky's DUNE. As had another artist on ALIEN, Chris Foss. This miniature was around 10 feet in circumference. The basis of the interior was sculpted foamcore. Weeks were then spent applying plasticene cladding and tubes to build up detail. This was mainly accomplished in the Bray Studios model shop by Peter Voysey. When he had finished, the "Derelict" was then moved, very carefully, to our shooting stage using a fork-lift truck. The weight was considerable. Placed in the miniature of the planet landscape she looked magnificent. During shooting, which was operated by Ridley Scott himself, freon gas was pumped into the air in great quantities and allowed to settle in layers over the model to suggest sky. To facilitate this, we had to open the main stage door, in the middle of winter, to reduce the ambient temperature. Ground smoke was pumped in later. We had one smoke gun of suitable size available to us. I ended up, on the day, being the one to service it. The miniature set was easily 100 yards square. With Ridley Scott looking through the camera, he would shout, "More in the background, Jon...no...too much...more to the left...more in the foreground". I was Speedy Gonzales with a smoke-gun, while the rest of the crew looked on amused. A great sequence of shots. This model helped carry the alien atmosphere and unnerved audiences a great deal, setting up the appearance of the alien eggs, the facehugger, and the dead "space jockey" with the blown out chest inside the ship. Masterly creation of atmosphere and suspense.



This is a shot of the main "hero" miniature of the Nostromo tug, containing the crew, on its messy descent to the alien planet. Held up by a hidden forklift truck operated by Special Effects Technician Ian Wyngrove from behind the many black velvet flats we deployed. We spent about two weeks shooting the entire landing sequence. This involved many late nights on the shooting stage. It was a major issue preparing each shot. The positioning of the model. The delicate and considerable lighting by Model DP Denys Ayling. The correct density of smoke. We had several huge wind machines deployed. The jets of the Nostromo herself as she came into land were suggested by freon gas outlets built into the engine nacelles. A gas we subsequently found out afterwards was hazardous to inhale for prolonged periods! So one could not do this today. Considerable quantities of a lightweight insulating material called vermiculite were also thrown in the path of the wind machines to help suggest the howling storm which greeted the crew on their arrival on the planet. The approach was very practical. It was all done in front of the camera. Much rehearsal was needed with everyone in synchronisation to achieve these shots. She also looked magnificent on the shooting stage at all times. A real ship. Heavy, industrial, and slightly battered and tired. Just the kind of ship Weylan Yutani would issue and have it used constantly until it fell to pieces in space. The Company did not care much for its' employees. Extra lighting was also applied to the underside of the model, consisting of strings of grain-of-wheat bulbs dressed to shot as Ridley Scott looked through the camera, and a row of tungsten 500W main lights attached to the rear of the model, which kicked in after she landed on the planet. Photographing all this required great skill and patience.



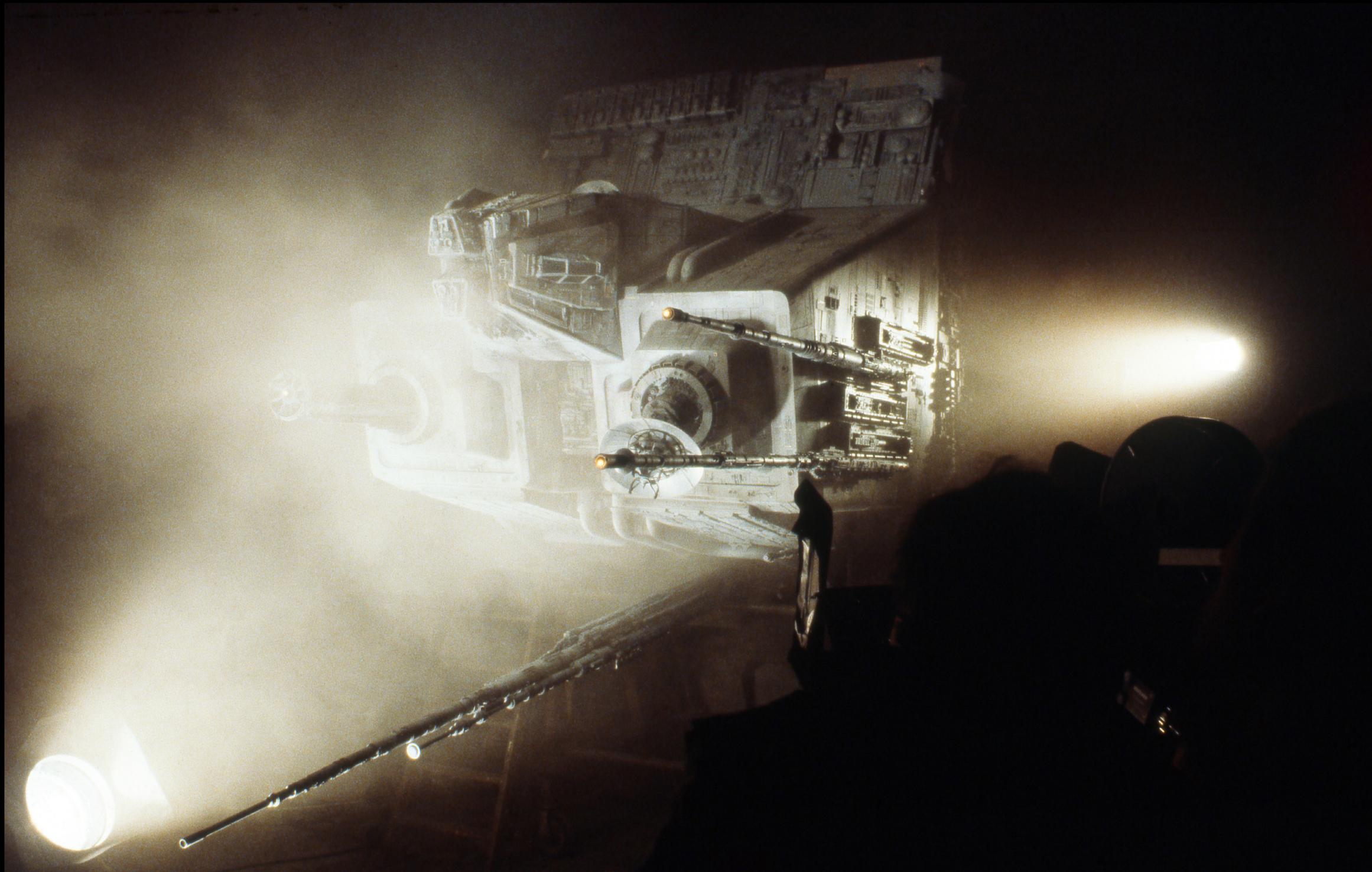
A shot of a miniature construction of the nose section of the iconic Nostromo tug at Bray Studios in 1978. This was meticulously put together to match detail on the main "hero" model of the vessel. The model crew were challenged to match materials, shapes and detail using the main miniature as a close reference. Several weeks in construction and a beautiful result. In addition to being built to serve close detail as the ship was landing on the alien planet, she was primarily built to house rear projection from a 16mm projector located inside the model. Scenes were shot on the Nostromo cockpit set, printed to film, and thrown onto a tiny screen located inside the miniature's navigation windows, to show the crew moving around inside. Shot in a smoke environment, and with howling wind added to the sound design, this represented one of the most desolate and forbidding atmospheres in the film as Nostromo sat on this strange world awaiting developments. Her engines had been damaged in the landing and there was a certain amount of tension implied as to whether or when she would take off again. The architecture of the miniature herself added to this. Unfriendly and future industrial. A long way from STAR WARS. Exposures were very complicated on these shots. The light and colour balance of the projected images having to be adjusted to that of the miniature. A variable speed motor was used on the Mitchell S35 to synchronise camera shutter speed with that of the rate of projection of the previously filmed images of the crew. This rear projection technique was, of course, used in such films as 2001: A SPACE ODYSSEY and expedited doing the entire effect in-camera with no need of later photochemical opticals.



A shot of the all too briefly glimpsed Refinery "engine room" miniature at Bray, set up for shooting on the model stage. A previous version of this highly technical and industrial looking model had been built and test shots were achieved on it. This older version was deemed unsatisfactory so it was back to the drawing board in the model shop. Nothing was wasted on the production, and the tower supports featured in the old version ended up being added to the main "hero" miniature of the Nostromo tug where they can be seen in the film as extension engines or subsidiary rocket motors for the vessel. This miniature also echoes the previous industrial or military yellow the main Nostromo miniature had sported during the early months of our shooting on her in the model stage. The power source of the Refinery and that of the Nostromo was thought to be nuclear fission for some advanced kind of star-drive. Elements extensively laid out by Ron Cobb in his early projections about these vessels. This new miniature was about 15 feet long and stood about 5 feet high. She was laid out in table-top form, foreground and background, in a form of multi-plane dressing, such as was later done for the "Hades" landscape in BLADE RUNNER. This made holding focus in the anamorphic format very complicated and required copious amounts of light and balanced exposures. Behind the central window images of Ripley moving around inside in preparation to blowing up the Refinery at the film's climax, were provided by a 16mm camera showing previously filmed footage. Images were synchronised to camera by variable speed motor. Photography was delicate. The actual miniature section of that window had been constructed by Bill Pearson in the model shop and contained much skilled fine detail which would hold up to any extreme close-ups we decided to do on the stage. As it was, this miniature made a very brief appearance in master shot only in ALIEN.



A shot of the miniature of the alien "Derelict" ship on the model shooting stage at Bray. Meticulously crafted directly from renderings by HR Giger, and about 10 feet across, this was the sight that met the three astronauts Dallas, Kane, and the female Lambert after their 1700 yard walk across the planet. The android Ash, of course, knows this ship was there all along as he sat comfortably in his "blister" directing operations. Smoke was pumped in to add atmosphere. A tremendous amount of light was also needed to photograph this set, requiring many camera tests. Density of smoke was crucial to the effect and added weight and scale to the model onscreen. The landscape seen in the foreground was built in miniature to expand on the pieces glimpsed in the live action shots of the actors achieved earlier at Shepperton Studios. Animal bones delivered from Shepperton abattoir were incorporated into the miniature landscape to echo Giger's biomechanical theme and to suggest impending death for the crew. Subliminal in the miniature, they nonetheless registered with the audience and added to the utterly forbidding tension and visuals. To give added scale to this miniature, three tiny miniature astronaut figures were deployed, about 3 inches tall, each with a grain-of-wheat bulb fitted to their heads to imply the interior helmet lighting on the costumes. These were moved very slightly during the actual shot to give the impression of figures walking as they approached this monolithic and totally alien craft. Incorporated into the sequence were video shots, hand held and operated by Ridley Scott himself, aided by video technician Dick Hewitt. Ridley, practically on his hands and knees, loved doing this, and kept asking Dick to provide "more signal break-up" as he shot. Again this was in-camera, very organic and almost a "live-action" approach thus avoiding post-production opticals, and were very effective in creating tension. We knew that this miniature, of which nothing had ever been seen like it onscreen at the time, was a powerful aesthetic in this seminal film. The overlaid dialogue slightly earlier in the astronaut planet walk sequence, from John Hurt playing Kane, became even more tangible. "We must go on. We have to go on". Kane had no idea he was advancing to his doom as his scientific curiosity led to his becoming the first victim ever of the alien Facehugger. The intricate detail on this miniature is still beautiful to behold. A work of sculpture, totally hand-made.



A shot of the large scale miniature of the nosecone section of the Nostromo. The business end containing the crew on their terrifying descent to the alien planet. Meticulously constructed in the Bray model shop. This shot more than most conveys the forbidding industrial nature of the vessel, in a hostile environment, many light years from home and human contact. The scale of this miniature was decidedly larger to house a 16mm projector to facilitate thrown images of plates already shot on the full size cockpit set of actors moving around inside. High key lighting was deployed to pick out detail, balanced beautifully by model unit DP, Denys Ayling. Very little reflected or bounced light was used in the miniatures photography. This required more meticulous meter readings and a judging of the film stock, which was often pushed in the laboratory by one full stop. This was some years before Eastman Kodak developed their full range of high speed emulsions. The quality of the blacks in the exposure was of paramount importance. We never tired of looking at Nostromo on the unit. Everywhere you could see new possible angles. Being a film fan also helped me personally in the model construction period. I was aware Jon Finch at that time was cast as Kane in ALIEN, and I was a huge admirer of his work. Constructing the models, I thought, "Jon Finch is going to fly in this". This was the normal practice in that particular model shop. We connected the wood and plastic with real people in the script and so saw the film as a whole unified effort. This shot still moves me. One can almost smell the smoke we pumped in for the shot. With sound added, it was, and is, amazing.



Film-making is also very much about the people one meets and works with. This shot of miniature unit DP Denys Ayling standing in the middle of the alien "Derelict" landscape and next to the derelict miniature itself, taking a light reading, conveys much to me. Not least the responsibility of the cinematographer who is alone in deciding exposures for the whole endeavour. Denny became a very good friend and taught me a lot about lighting. ALIEN won the Academy Award for Best Visual Effects in 1979 and Denny was one of the four people, along with Brian Johnson, Nick Alder and HR Giger, to fly to the ceremony in Los Angeles to pick up the award. The Brits were very proud that day. More moving was Denny's habit of making sure he visited my home on my birthday and brought the Oscar statuette with him. He would leave it on my mantelpiece for a month saying to me, "It's your Oscar too". A cameraman of long experience, a gentleman and one of the old school heritage, he took all the practical jokes played on him by us on the shooting stage in good stead. A favourite was blacking up the eyepiece on the Mitchell S35 and when he looked through he would come away with a "black panda eye". We would compound this by suggesting he look through with the other eye too, and so he would walk around for hours looking like he had been in the boxing ring, totally unawares. This shot also reveals much detail in the miniature itself as well as the size of the set. Seeing it in "daylight" as it were, only underscores the skill which which Denny photographed it to look as it did onscreen. I was very lucky to have known him. Clearly visible are the "tortured bones" incorporated into the landscape, which themselves imply a deathly and dangerous environment. These were real animal bones supplied from Shepperton abattoir. ALIEN was a very visceral science fiction horror film, containing many subliminal metaphors in its' imagery.

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