

Flowsheet Diagram

Process flow diagram for the production of Acetonitrile (CH₃CN) from Acetic Acid (CH₃COOH) and Ammonia (NH₃) via the Amoniasi process.

The diagram shows the following components and streams:

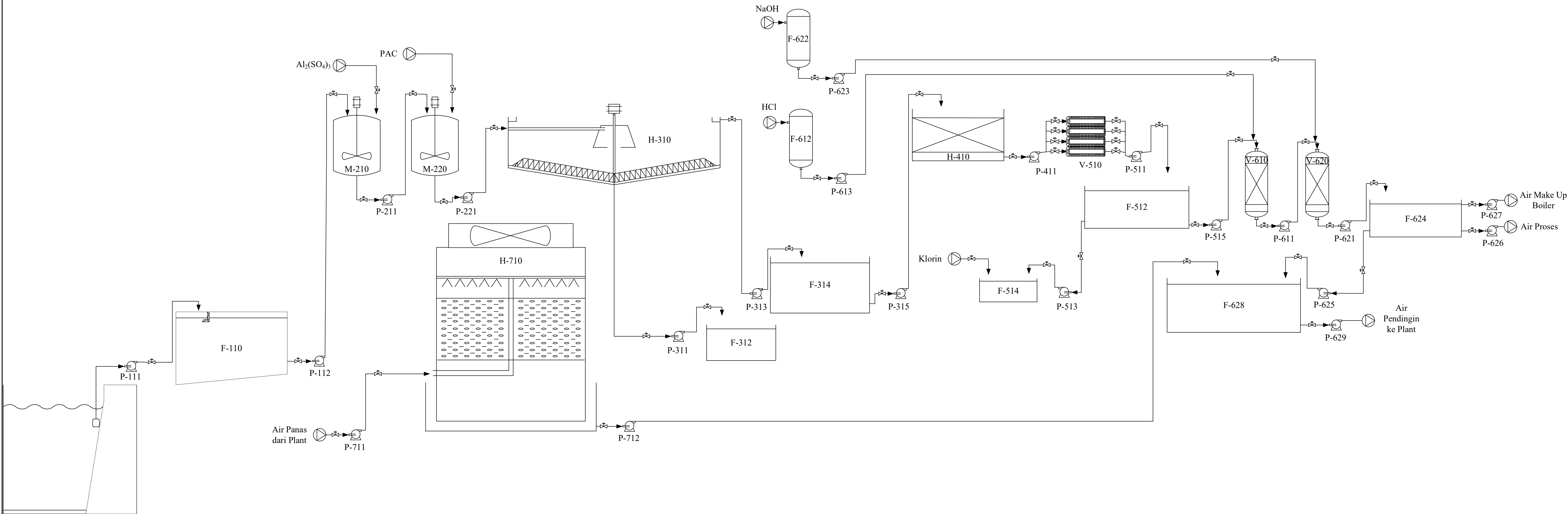
- Storage Tanks (F):** F-110 (CH₃COOH), F-120 (NH₃), F-130 (C₂H₆O₂), F-140 (H₂SO₄).
- Distillation Columns (C):** C-410, C-510, C-610.
- Reboilers (RB):** RB-415, RB-514, RB-614.
- Condensers (E):** E-112, E-124, E-212, E-213, E-411, E-412, E-511, E-512, E-611, E-616.
- Heat Exchangers (E):** E-124, E-126, E-212, E-213, E-411, E-412, E-511, E-512, E-611, E-616.
- Compressors (K):** K-113, K-125.
- Expanders (EV):** EV-123, EV-211.
- Pumps (P):** P-111, P-121, P-131, P-141, P-212, P-311, P-413, P-416, P-513, P-515, P-613, P-615.
- Valves (V):** V-310, V-320, V-412, V-512, V-612.
- Reactor (R):** R-210.
- Stripper (V):** V-310.
- Scrubber (V):** V-320.
- Accumulators (A):** A-112, A-113, A-114, A-115, A-116, A-117, A-118, A-119, A-120, A-121, A-122, A-123, A-124, A-125, A-126, A-127, A-128, A-129, A-130, A-131, A-132, A-133, A-134, A-135, A-136, A-137, A-138, A-139, A-140, A-141, A-142, A-143, A-144, A-145, A-146, A-147, A-148, A-149, A-150, A-151, A-152, A-153, A-154, A-155, A-156, A-157, A-158, A-159, A-160, A-161, A-162, A-163, A-164, A-165, A-166, A-167, A-168, A-169, A-170, A-171, A-172, A-173, A-174, A-175, A-176, A-177, A-178, A-179, A-180, A-181, A-182, A-183, A-184, A-185, A-186, A-187, A-188, A-189, A-190, A-191, A-192, A-193, A-194, A-195, A-196, A-197, A-198, A-199, A-200, A-201, A-202, A-203, A-204, A-205, A-206, A-207, A-208, A-209, A-210, A-211, A-212, A-213, A-214, A-215, A-216, A-217, A-218, A-219, A-220, A-221, A-222, A-223, A-224, A-225, A-226, A-227, A-228, A-229, A-230, A-231, A-232, A-233, A-234, A-235, A-236, A-237, A-238, A-239, A-240, A-241, A-242, A-243, A-244, A-245, A-246, A-247, A-248, A-249, A-250, A-251, A-252, A-253, A-254, A-255, A-256, A-257, A-258, A-259, A-260, A-261, A-262, A-263, A-264, A-265, A-266, A-267, A-268, A-269, A-270, A-271, A-272, A-273, A-274, A-275, A-276, A-277, A-278, A-279, A-280, A-281, A-282, A-283, A-284, A-285, A-286, A-287, A-288, A-289, A-290, A-291, A-292, A-293, A-294, A-295, A-296, A-297, A-298, A-299, A-300, A-301, A-302, A-303, A-304, A-305, A-306, A-307, A-308, A-309, A-310, A-311, A-312, A-313, A-314, A-315, A-316, A-317, A-318, A-319, A-320, A-321, A-322, A-323, A-324, A-325, A-326, A-327, A-328, A-329, A-330, A-331, A-332, A-333, A-334, A-335, A-336, A-337, A-338, A-339, A-340, A-341, A-342, A-343, A-344, A-345, A-346, A-347, A-348, A-349, A-350, A-351, A-352, A-353, A-354, A-355, A-356, A-357, A-358, A-359, A-360, A-361, A-362, A-363, A-364, A-365, A-366, A-367, A-368, A-369, A-370, A-371, A-372, A-373, A-374, A-375, A-376, A-377, A-378, A-379, A-380, A-381, A-382, A-383, A-384, A-385, A-386, A-387, A-388, A-389, A-390, A-391, A-392, A-393, A-394, A-395, A-396, A-397, A-398, A-399, A-400, A-401, A-402, A-403, A-404, A-405, A-406, A-407, A-408, A-409, A-410, A-411, A-412, A-413, A-414, A-415, A-416, A-417, A-418, A-419, A-420, A-421, A-422, A-423, A-424, A-425, A-426, A-427, A-428, A-429, A-430, A-431, A-432, A-433, A-434, A-435, A-436, A-437, A-438, A-439, A-440, A-441, A-442, A-443, A-444, A-445, A-446, A-447, A-448, A-449, A-450, A-451, A-452, A-453, A-454, A-455, A-456, A-457, A-458, A-459, A-460, A-461, A-462, A-463, A-464, A-465, A-466, A-467, A-468, A-469, A-470, A-471, A-472, A-473, A-474, A-475, A-476, A-477, A-478, A-479, A-480, A-481, A-482, A-483, A-484, A-485, A-486, A-487, A-488, A-489, A-490, A-491, A-492, A-493, A-494, A-495, A-496, A-497, A-498, A-499, A-500, A-501, A-502, A-503, A-504, A-505, A-506, A-507, A-508, A-509, A-510, A-511, A-512, A-513, A-514, A-515, A-516, A-517, A-518, A-519, A-520, A-521, A-522, A-523, A-524, A-525, A-526, A-527, A-528, A-529, A-530, A-531, A-532, A-533, A-534, A-535, A-536, A-537, A-538, A-539, A-540, A-541, A-542, A-543, A-544, A-545, A-546, A-547, A-548, A-549, A-550, A-551, A-552, A-553, A-554, A-555, A-556, A-557, A-558, A-559, A-560, A-561, A-562, A-563, A-564, A-565, A-566, A-567, A-568, A-569, A-570, A-571, A-572, A-573, A-574, A-575, A-576, A-577, A-578, A-579, A-580, A-581, A-582, A-583, A-584, A-585, A-586, A-587, A-588, A-589, A-590, A-591, A-592, A-593, A-594, A-595, A-596, A-597, A-598, A-599, A-600, A-601, A-602, A-603, A-604, A-605, A-606, A-607, A-608, A-609, A-610, A-611, A-612, A-613, A-614, A-615, A-616, A-617, A-618, A-619, A-620, A-621, A-622, A-623, A-624, A-625, A-626, A-627, A-628, A-629, A-630, A-631, A-632, A-633, A-634, A-635, A-636, A-637, A-638, A-639, A-640, A-641, A-642, A-643, A-644, A-645, A-646, A-647, A-648, A-649, A-650, A-651, A-652, A-653, A-654, A-655, A-656, A-657, A-658, A-659, A-660, A-661, A-662, A-663, A-664, A-665, A-666, A-667, A-668, A-669, A-670, A-671, A-672, A-673, A-674, A-675, A-676, A-677, A-678, A-679, A

No	Kode	Nama Alat
1	F-110	Tangki Penyimpanan Asam Asetat
2	P-111	Pompa 1
3	E-112	Heat Exchanger 1
4	K-113	Kompresor 1
5	E-114	Heat Exchanger 2
6	F-120	Tangki Penyimpanan Amonia
7	P-121	Pompa 2
8	H-122	Vaporizer
9	EV-123	Expander Valve 1
10	E-124	Heat Exchanger 3
11	K-125	Kompresor 2
12	E-126	Heat Exchanger 4
13	F-130	Tangki Penyimpanan Etilen Glikol
14	P-131	Pompa 3
15	F-140	Tangki Penyimpanan Asam Sulfat
16	P-141	Pompa 4
17	E-132	Heat Exchanger 5
16	R-210	Reaktor Fixed-Bed Multitube
17	EV-211	Expander Valve 2
18	E-212	Heat Exchanger 6
19	E-213	Heat Exchanger 7
20	V-310	Stripper
21	P-311	Pompa 5
22	E-312	Heat Exchanger 8
23	V-320	Scrubber
24	C-410	Column Distilasi 1
25	E-411	Condensor 1
26	V-412	Akumulator 1
27	P-413	Pompa 6
28	E-414	Heat Exchanger 9
29	RB-415	Reboiler 1
30	P-416	Pompa 6
31	E-417	Heat Exchanger 10
32	E-420	Heat Exchanger 11
33	C-510	Column Distilasi 2
34	E-511	Condensor 2
35	V-512	Akumulator 2
36	P-513	Pompa 7
37	RB-514	Reboiler 2
38	P-515	Pompa 8
39	E-517	Heat Exchanger 12
40	C-610	Column Distilasi 3
41	E-611	Condensor 3
42	V-612	Akumulator 3
43	P-613	Pompa 9
44	RB-614	Reboiler 2
45	P-615	Pompa 10
46	E-616	Heat Exchanger 13
47	F-710	Tangki Penyimpanan Asetonitril
48	F-720	Tangki Penyimpanan Asam Asetat

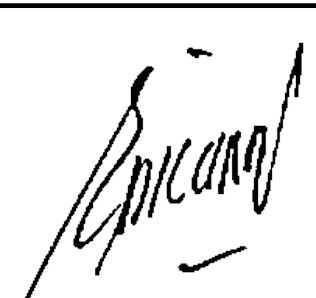
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FLWSHEET PABRIK ASETONITRIL DARI ASAM ASETAT DAN AMONIA DENGAN PROSES AMONIASI	
	PROGRAM STUDI TEKNIK KIMIA FAKULTAS TEKNIK DAN SAINS UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAWA TIMUR 2026

FLOWSHEET UTILITAS PRA RANCANGAN PABRIK ASETONITRIL DARI ASAM ASETAT DAN AMONIA DENGAN PROSES AMONIASI



No	Kode	Nama Alat
1	F-110	Bak Penampung Air Laut
2	P-111	Pompa 1
3	P-112	Pompa 2
4	M-210	Tangki Koagulasi
5	P-211	Pompa 3
6	M-220	Tangki Flokulasi
7	P-221	Pompa 4
8	H-310	Clarifier
9	P-311	Pompa 5
10	F-312	Bak Penampungan Flok
11	P-313	Pompa 6
12	F-314	Bak Penyimpanan Air Setengah Bersih
13	F-130	Tangki Penyimpanan Etilen Glikol
14	P-315	Pompa 7
15	H-410	Sand Filter
16	P-411	Pompa 8
17	V-510	Sea Water Reverse Osmosis
18	P-511	Pompa 9
19	F-512	Bak Penyimpanan Air Bersih
20	P-513	Pompa 10
21	F-514	Bak Penyimpanan Air Sanitasi
22	P-515	Pompa 11
23	V-610	Kation Exchanger
24	P-611	Pompa 12
25	F-612	Tangki Penyimpanan HCl
26	P-613	Pompa 13
27	V-620	Anion Exchanger
28	P-621	Pompa 14
29	V-622	Tangki Penyimpanan NaOH
30	P-623	Pompa 15
31	F-624	Bak Penampung Air Demineralisasi
32	P-625	Pompa 16
33	P-626	Pompa 17
34	P-627	Pompa 18
35	F-628	Bak Penampung Air Pendingin
36	P-629	Pompa 19
37	H-710	Cooling Tower
38	P-711	Pompa 20
39	P-712	Pompa 21

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